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Community Engagement and Financial Vulnerability During an Economic Crisis

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Community Engagement and Financial Vulnerability

During an Economic Crisis

by

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Dedication

This dissertation is dedicated to H D and Madeleine, as am I.

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Community Engagement and Financial Vulnerability

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by

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The University of Texas at Austin, 2015

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As donors of time and money analyze nonprofit organizations to determine where they can best invest their donations, comparative information is difficult to find. Without clear and compelling metrics to compare one potential nonprofit recipient to another, how can these donors make informed decisions about where their time and money will best be utilized? Due to the difficulties of comparing the value of one mission to another in an objective way, the metrics used in this study consider nonprofit organizations and their readiness to use donations effectively from an organizational perspective rather than a mission-focused one. The Community Engagement Index (CEI) assesses an organization's commitment to integrating volunteer support throughout all its operational realms, while the Financial Vulnerability Index (FVI) considers the long-term financial stability of the organization.

In this study, a purposive sample of nonprofit organizations in Texas was examined through the lens of the FVI in seven biennial time periods from 2000 to 2012, while CEI results were considered in 2010. The intention was to determine whether the Great Recession of 2007-2009 caused meaningful changes in FVI scores for this sample. Due to inconsistent filings of Form 990 from which FVI data was

pulled, consistent FVI information was available for only 29 of the organizations in the sample. The organizations in this sample showed little statistically significant change in their FVI during the time of the recession, though it is difficult to know whether this lack of change is due to the small size of the sample or the strong economic performance of Texas throughout the economic crisis that hit other states more severely. Further testing with a larger sample, as well as CEI data from additional years, would strengthen a future study of this question. The unique nature of the information provided by each of these metrics is shown by the fact that they do not correlate with standard financial indicators.

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Chapter 1: Introduction

Each scholar is drawn to her or his field by a different path. My interest in the nonprofit sector from the perspective of a strategic donor was cultivated by a summer internship. I wandered into the Stanford Theatre in Palo Alto during a college summer vacation, looking for some way to pay rent. The theater was purchased in 1987 by the David and Lucile Packard Foundation and run by the Stanford Theatre Foundation through the patronage of David Woodley Packard. After getting a job scooping popcorn, I asked my manager for extra work hours. I ended up serving as an intern at the Packard Humanities Institute and working with David W. Packard as the David and Lucile Packard Foundation was reinventing itself following the demise of David A. Packard, co-founder of Hewlett-Packard. With the inclusion of David A. Packard's bequest, the Foundation had grown tremendously, and the staff was focused on how best to influence the nonprofit sector with these new assets. One of the key components of the new vision was strategic giving: grants that would support greater efficacy and efficiency in essential nonprofit organizations. This initiative is currently reflected in the David and Lucile Packard Foundation's capacity building grants, carried out through their Organizational Effectiveness program (The David and Lucile Packard Foundation, n.d.). These grants are intended to smooth operational challenges facing a nonprofit, allowing them to spend their time on the things they do well instead of worrying about back office issues such as bookkeeping, website updates, or training costs.

This approach intrigued me. At 21, I had already been working in the nonprofit sector with disabled athletes for five years, and had struggled with inadequate resources. I spent more of my time fixing old, broken equipment than I did with my athletes. At the same time, I had seen established, well-funded nonprofit organizations raise additional funding with ease while provided little feedback on their results. The David and Lucile Packard Foundation Organizational Effectiveness grants were a

way to solidify the organizational structure of nonprofit organizations. With this solid infrastructure, these organizations had more resources available to focus on their mission-focused work. This approach intrigued me.

During my several years of work in the for-profit sector, I remained engaged in the nonprofit sector and attempted to support planning and infrastructure projects with my time and talents in much the same way that the David and Lucile Packard Foundation's Organizational Effectiveness initiative was supporting such projects with treasure. During my nonprofit work, fund development professionals informed me that infrastructure dollars were difficult to raise. I grew more curious about the motivations for giving, and the types of information donors sought before or after a donation. Did donors have specific questions which would affect their willingness to give? If so, there might be certain data a nonprofit could share to support potential donors. If not, nonprofit organizations might be able to spend less time preparing reports and more time working on direct services. As I watched the economy fluctuate, I also became curious about how nonprofit organizations fare during economic crises. How did donors respond to financial crises? Did economic downturns cause shifts in funding patterns? Did donors give more during a downturn in acknowledgement of greater need, or did donations drop because potential donors had less to give? These questions drove the creation of the first part of this study, in which I will examine the financial vulnerability of nonprofit organizations in Central Texas between the years of 2000 and 2012, to learn about the shifts in their funding structures and financial stability during the Great Recession of 2007-2009.

Beyond financial performance, my curiosity has led me to explore nonprofits from an organizational strategy perspective, though my own consulting work and through the Masters in Business Administration curriculum at the McCombs School of Business. During my Masters work, I learned

about the strategic importance of effective volunteer engagement and management from Dr. Sarah Jane Rehnborg at the RGK Center. Thanks to her, I now include volunteers as donors to nonprofit organizations. Their gifts of time provide benefits to nonprofits, much like the gifts from financial donors. After focusing on the relationships between public charities and their financial supporters between 2000 and 2012, I will also consider 'time donors,' or volunteers, in this study. I plan to explore how financial sustainability varied in comparison to the strength of volunteer programs in the examined organizations.

Motivating individuals to give their time and money to nonprofit organizations is challenging work. By examining financial sustainability and its inverse, financial vulnerability, we can gain a better understanding of which organizations are at risk during an economic downturn. Clearer knowledge of an organization's risk of ceasing operations – and of what level of support might reduce this risk – could be a useful data point to share with potential funders.

Scope of the Nonprofit Sector

While this study will focus on the financial status of nonprofit organizations, defining the worth of a nonprofit's work goes beyond its balance sheet. The financial strength of a nonprofit should be secondary in defining its success after a primary examination of its progress toward its mission. So how can this mission-centric information best be conveyed? Measuring the success of a nonprofit organization is not an easy task. Great effort has been expended in trying to establish a consistent way of measuring varied organizations in the sector in search of an 'apples to apples' comparison.

The nonprofit sector includes 1.6 million 501(c)(3)-classified public charity organizations registered with the Internal Revenue Service (IRS) (Urban Institute, 2013). Religious congregations and organizations with less than $5,000 in annual revenue are part of the sector, but are not part of this tally. The sector contributed over $800 billion to the economy in 2012 which represented 5.5% of

Gross Domestic Product (GDP), and the sector provided 9.2% of all wages and salaries paid in the United States. Volunteers donated time valued at almost $300 billion to the sector, and donations to the sector were also close to the $300 billion mark. Total assets held by the sector are estimated at $2.7 trillion, running on total annual budgets of roughly $1.5 trillion. Fully half of nonprofit budgets across the United States are financed by fees for goods and services paid by private sources, while fees collected from government agencies comprise just under a quarter of total nonprofit revenue. Private contributions account for 13.3% of the budgets of nonprofits across the nation on average, while government grants provide 8.3% of the total budget. If these numbers don't sound representative of the sector as a whole, note that they are skewed by hospitals and higher education institutions. Comprising less than 3 percent of all nonprofits, they are responsible for 61% of the revenues and expenses for the sector as a whole (Urban Institute, 2013). For the purposes of this paper, I will use the terms 'nonprofit' and 'nonprofit organization' to refer to public charities in receipt of 501(c)(3) designation from the IRS.

Other than donors (of time and of money), what groups might be interested in evaluating the financial stability of nonprofit organizations? Our communities carry larger tax burdens thanks to the tax exemptions granted to nonprofits. These tax exemptions and benefits affect income tax, property tax, minimum wage rates, bankruptcy, and postage costs (H. B. Hansmann, 1980). These cumulative benefits were estimated to be worth between $31 - $48 billion in 2008-09 alone (Sherlock, 2010). In a time when funding is tight, this is a meaningful amount of money. This revenue means that the remaining tax needs of our community must be met without the assistance of nonprofit organizations, increasing the effective tax rate for the remainder of the community and reducing the funding available for the government to provide services. While these dollars then enter the money supply and contribute to the tax basis in varied ways, there is still a reduction in available

tax dollars due to these exemptions. In return, the assumption is that nonprofit organizations are meeting community needs left unmet by the free market (H. Hansmann, 1987).

What can we measure?

One of the few pieces of data that can be tracked is the survival of an organization. Given the cost and friction in launching a new organization along with the lemma that nonprofit organizations exist to increase social good, I posit that the continuity of organizations, rather than re-launching new organizations to address ongoing community challenges, is positive on the whole. New organizations also face a newness bias (Kanter & Summers, 1994) as the community surrounding them adjusts to their presence. The new organization must build new relationships within the funding community and its organizational field, and find ways to reach out to its intended client base. None of this work is directly providing services to the intended population.

Further, the metric of survival does not directly correlate with services being provided: in fact, there may be a negative correlation. An organization that is not concerned with survival may spend out its budget on providing excellent services for a short period of time, rather than focusing on fundraising and long-term management. The most efficient and effective nonprofits may be those that have failed due to spending all their resources on direct services.

Another issue with survival as a metric of success is that it offers little guidance to the nonprofit's management team on how best to make decisions in the short term (Kanter & Summers, 1994). Given that the support of a major benefactor can bias an organization's survival and allow the organization to continue operating in the face of weak management or in pursuit of goals that do not support the mission, organizational longevity is not always an indication of organizational quality. Given the expectation that an organization's reputation will grow with its age (Okten & Weisbrod, 2000), higher ages are expected to correlate with better reputations. Kanter and Summers

(1994) note that organizational competition is a critical component to receiving feedback. In other words, a very weak organization may exist for a long time if there are no competitive services being offered. Barriers to entry that create situations like this may include remote rural geography, high startup costs, or a dearth of qualified personnel.

With all of the challenges listed above, Kanter and Summers conclude that "in the domain of nonprofit organizations, survival can indeed be an appropriate effectiveness standard" (p.226, Kanter & Summers, 1994). Kimberly agrees that "survival is one criterion that most researchers agree is a necessary, although not sufficient, condition for success" (Kimberly, 1979). In order to survive, organizations must maintain enough resources to carry them through turbulent environments. These resources may be in several forms which could include cash reserves, product and service lines garnering sufficient net income to bolster the organization, generous grantors, committed volunteers willing and able to fulfill critical roles, extensive in-kind contributions from other organizations, or a blend of these and other forms of support. Emery and Trist (2009) define turbulent environments as those fields in which organizations face high levels of relevant uncertainty. In turbulent markets, forces from the outside environment can render the consequences of an organization's actions unpredictable. Legislative changes, new entrants into the market, and shifts in clientele and other inputs cause organizations to operate in a world in which nothing feels certain. Even survival is not assured.

Financial Vulnerability

In order to survive environmental turbulence, nonprofit organizations must ensure that they have sufficient financial resources to continue operation. Greenlee and Trussel (2005) modified Tuckman and Chang's (2001) Financial Vulnerability Index (FVI) to create an absolute, rather than a relative, metric of financial vulnerability. By determining thresholds of financial strength above which an organization is unlikely to reduce programs in the future, as well as a threshold below which

organizations were in meaningful danger of reducing programs or closing their doors, the modified FVI contributed a tool allowing nonprofit organizations and their supporters to assess the relative viability of an organization's financial position. I intend to utilize this metric to examine how a set of nonprofit organizations in the state of Texas fared through the recession of 2007-2009. Both the theoretical and historical background of the FVI will be discussed at greater length in the methodology chapter of this document. If this index can be shown to reveal important data about the sustainability of a nonprofit during a financial crisis, this simple metric may provide valuable information to potential supporters of a given organization – whether those supporters are considering donating time, goods, services, or cash to an organization. Since the FVI of an organization can be calculated easily, organizations can use it for internal longitudinal trend information, and can also share it with donors to portray their fiscal stability as they choose.

Community Engagement and Voluntarism

Nonprofit organizations devote varying amounts of attention to their interactions with their surrounding community. While every 501(c)(3) public charity is required to have a board, these boards can be 'rubber stamp' groups that agree with anything the CEO proposes (Carver, 2006; R.D. Herman & Van Til). By contrast, organizations that invest time and resources into building and maintaining ties to their surrounding community are creating non-financial resources. Ironically, the construction of a strong cadre of devoted volunteers may reduce the attractiveness of a 990 filing by reducing program expenses and thus increasing the apparent percentage of budget spent on administration and fundraising, these non-financial resources can yield potent organizational benefits (Charity Navigator, 2014a). Volunteers of many stripes can form a cadre of supportive voices when critical legislation is on the table, while volunteers with specific talents can offer strategic guidance and connections to an organization. However, most of the research on volunteering has focused on the value volunteers receive from their work ("Nonprofits by the Numbers", n.d.; Chinman &

Wandersman, 1999). The basic premise here is that for volunteering to occur, the individual volunteer must be receiving value greater than the cost they incur, or else they would not agree to volunteer. We may assume that nonprofit organizations would be unlikely to continue to utilize volunteers if they were not also receiving value exceeding the cost they incur. Given that nonprofit organizations are required to have governing boards which are usually filled by volunteers, the value they obtain may be the freedom to continue to exist. The value of volunteers to an organization is usually measured in financial terms (Hager & Brudney, 2004; The RGK Center, n.d.), based on the tasks they perform and with some consideration of the replacement cost: the amount the organization would need to spend to fulfill those tasks if all the volunteers were to quit (Clary et al., 1998; Yanay & Yanay, 2008). Susan Ellis points out that, were these volunteers to quit en masse, nonprofits would not necessarily hire staff to fill all of these roles (Ellis, 1996), though it is not clear whether the reason not to fill these roles with paid staff is due to lack of need or lack of funding to support the additional staff. Hager and Brudney discovered that while most nonprofit organizations feel that volunteers save them money, the largest benefit of volunteers was in program delivery improvement. Further, they found that volunteers allowed organizations to provide additional services which would not have been possible without volunteer support (Hager & Brudney, 2004).

Volunteers garner some of their benefit through social interaction. Putnam explains that as working hours grow longer, the number of children living in houses with no stay-at-home parent increases, and technology provides more leisure entertainment at home rather than outside the home, less time is available for social interaction. Organizations such as churches, unions, and women's organizations have seen precipitous drops in membership, and a commensurate drop in civic engagement (Hager & Brudney, 2004). Wellman and Leighton present the idea of a liberated community as a group which is drawn together by bonds more central than those of geography (Brudney & Meijs, 2009). Putnam agrees that there are components of community that are

developed through online interaction, but argues that these communities are less likely to take collective action (Putnam, 2012).

Volunteer work that is undertaken alongside other volunteers in the same physical space, however, provides benefits for the volunteer (Miller, 2002). The social connection gained by working with fellow volunteers who share a passion for a given cause is one of the benefits of volunteering for the volunteer (Hager & Brudney, 2004). Most of the research on the positive impact of volunteering has examined the relationship from the perspective of the volunteer, not of the organization. Does the formation of these bonds accrue any value to the nonprofit for which the volunteers are working? Will an organization with strong volunteer management and community connection practices respond differently from its peers during a financial crisis?

The metric which was used to compare these volunteer management and community connection practices for this study was the Community Engagement Index, or CEI (Rehnborg & Poole, 2010). The CEI is a refinement of a tool created to answer the question, 'what are the traits of organizations that manage volunteers well?' The additional non-financial benefits of volunteers to organizations will be discussed in the methodology section of this document wherein the CEI and its history will be examined more thoroughly. One of the unique contributions that the CEI brings to the field is that it considers volunteer impact from a holistic, organization-wide perspective. The benefit which accrues to an organization as a whole of having a group of advocates for an organization out in the community is more difficult to measure than the internal impact of program volunteers.

The Great Recession of 2007-2009 created such a crisis for many nonprofits. Did organizations with strong community ties fare differently during that recession? In other words, did organizations with

higher levels of community engagement show different patterns of financial risk between the years of 2008 and 2012 than those with weaker community bonds?

This exploratory study began with an examination of the financial stability of 80 nonprofit organizations in the state of Texas as measured by Greenlee and Trussel's modification of Tuckman and Chang's Financial Vulnerability Index (FVI) (Greenlee & Trussel, 2000; Tuckman & Chang, 1991) in the years of 2000, 2002, 2004, 2006, 2008, 2010, and 2012.

Next, FVI scores were examined in conjunction with Community Engagement Index (CEI) scores in the year of 2010 to determine whether organizations with stronger community linkages showed different patterns of financial performance from their peers.

The consideration of a nonprofit organization from a perspective so strictly focused on financial performance may appear counterintuitive, given that nonprofits exist to strive towards their missions, not to increase their financial assets. I am examining organizations from this financial perspective due in part to the challenges of measuring financial performance, but also in hopes of reinforcing a metric which may help donors to understand how important their financial support is to the sustainability of a nonprofit organization. When a potential donor is examining two potential recipients of a major grant, calculating the FVI for these organizations may provide valuable feedback to the donor. The relevance and history of the FVI will be discussed in the following chapter.

Though this study will consider financial vulnerability and community engagement simultaneously in its second section, this is not meant to imply that the benefits of a successfully managed volunteer program can be quantified by a solely financial measure. Previous studies have shown that organizations with strong volunteer management practices receive more benefit from their volunteers than those with weak management practices (Hager & Brudney, 2004). Preliminary

findings from a different, organization-wide assessment, TCC Group's Core Capacity Assessment Tool (CCAT), suggest that organizations engaging more than 50 volunteers outperform their peers in many ways, including financial strength (Rehnborg, 2014). The comparison of an organization's performance on these two indices is meant to explore two secondary dimensions of nonprofit performance, without suggesting that performance in these dimensions defines the value of a given nonprofit organization. A careful focus on progress towards its mission should be the metric of success for any public charity. The challenges of measuring this progress are also addressed in the next chapter.

Chapter 2: Literature Review

When considering how best to invest in the nonprofit sector, donors of both time and money consider how to find good organizations doing good work in their communities. Both organizational mission and the likelihood that their time or dollars will be well-invested are important. The David and Lucile Packard Foundation supports this process through funding of infrastructure and organizational development efforts to strengthen organizations with strong missions and leaders that face internal structural challenges. For an organization to be well-prepared to utilize investments of time and money, it should have both a strong volunteer support structure and a stable financial foundation. While not every nonprofit serves its mission in a way that allows easy, smooth incorporation of volunteers, the organizations in this sample do engage volunteers and do accept financial donations. As a result, both of these elements are relevant in the sample organizations. In this study, these two components of the sample organizations were considered.

After a review of the history of voluntary work in the nonprofit sector in the United States, this chapter will include a review of the theoretical underpinnings of the study. Various measures of organizational success and stability will be considered, culminating in the selection of Greenlee and Trussel's (2000) modifications of Tuckman and Chang's Financial Vulnerability Index (1991) as the metric of choice whereby to assess an organization's long-term probability of survival. Next, the history of the Community Engagement Index will be reviewed, followed by a discussion of the three theories underlying the structure of that tool.

How Did the Nonprofit Sector Come to Be?

Having established the scope of the nonprofit sector in the U.S. economy, as well as its critical role in providing services in our society, I now add a review of the history of the sector. How did nonprofits evolve into their current role?

According to Salamon (2002), the first nonprofit in the nation was Harvard College, funded by a tax on corn. Hammack (2002) argues that a true nonprofit organization cannot be funded by a tax based on Salamon's own definition of nonprofits as being organizations that are self-supporting (Salamon, 1999), and therefore that the first nonprofits on American soil came into being after the American Revolution. Hammack suggests that before the Revolution, churches fulfilled many of the roles filled by nonprofit organizations in current American society. Churches managed education and social services including behavior reformation and indigent services, and Britain attempted to maintain some control over the now-independent colonies through the church, as well as through the Masons. Thus, the concept of community support organizations existed in the form of churches long before the Wilson-Gorman Tariff Act formally recognized the different tax status of public charities in 1894 (Arnsberger, Ludlum, Riley, & Stanton, n.d.) when the first federal corporate income tax was established and charitable organizations were exempted from it. Prior to the Revolution, voluntarism was a part of the culture of the colonies, but voluntary associations exploded after the war. Brown (1973) estimates that more than 2500 voluntary associations were formed between 1760 and 1830 in Massachusetts alone. The realms addressed – trade associations, health services, intellectual and cultural groups, and some political groups – were similar to those included in today's nonprofit sector.

Brown (1973) highlights an intriguing point about these early voluntary associations: nearly every one began with some exclusionary component. Before 1790, the groups were exclusively male. Between 1790 and 1810, women began to form single- and dual-gender groups. Trade groups were limited to professionals in a given industry, literary and cultural groups controlled entrance into their membership through social and financial means by requiring fees.

What caused this explosion of associations? The implementation of the separation of church and state coincided with efforts from Protestant and Catholic churches to incorporate proselytization and service of the "unfortunate" into one's Christian service (Hammack, 2002). With the Constitution implementing the separation of church and state as well as an explosion of commercial activity and population (R. D. Brown, 1973), voluntary associations allowed citizens to express their own priorities and values through a blend of associations, rather than having to choose between the strictures laid out by a given church or forgoing the support of a community of like-minded peers.

In the case of Dartmouth College v. Woodward (The Dartmouth College Case, 1874) the Supreme Court ruled that the contracts of nonprofit organizations cannot be altered by the government, reinforcing their autonomy as an independent sector. This was a case in which the trustees of Dartmouth College, an institution which had been formed by a grant by King George III in 1769 (prior to the Revolution) that had outlined the governance structure of the school and granted land to it. When the trustees deposed the president of the College in 1816, the New Hampshire legislature altered the charter to grant powers to the governor of New Hampshire including the ability to designate trustees and creating a state board with veto power over the trustees. These changes placed control of the College in the hands of the state, effectively moving it into the public sector. By overturning this transition and returning control of the College to the original board of trustees, the Supreme Court acknowledged that contracts, once entered into, should not be easily modified by the State, and that corporations had rights to maintain the property acquired under these contracts. While this case established rights for all corporations, the fact that the organization in question was a nonprofit organization further solidified the autonomy of nonprofit organizations in the face of governmental pressures.

To augment this independence from government control, nonprofits were granted exemption from federal income tax late in the nineteenth century. When the Wilson-Gorman Tariff Act of 1894 instituted the first federal income tax, three core principles were defined. First, the organization had to be formed for the purpose of public charitable benefit. Second, the funds of the organization could not be diverted to the benefit of an individual connected to the organization. Third, gifts to these organizations would be exempt from the income tax.

During the nineteenth century, records of donations are not extensive, but in 1922 private giving was estimated at 0.6% of gross national product, while the nonprofit sector comprised roughly 1% of the workforce (Hammack, 2002). While this may seem a pittance for total donations, note that currently the nonprofit sector makes up 9.2% of the U.S. workforce and annual donations are roughly 2% of Gross Domestic Product (GDP) per year (Bureau of Labor Statistics, 2012). To reach the same ratios reached in 1922, donations to the sector would have to increase by roughly half a trillion dollars annually – almost three times the current rate.

As nonprofits explored different funding streams, they continued to grow throughout the 19th century. Segregation was a common theme of these organizations, whether by race, religion, or gender. Associations provided some support for African Americans and women, but were wielded most effectively by white Protestant men to maintain commercial control (Hammack, 2002). Associations of craftsmen could reject membership applications for any reason, including race, class, or country of origin, excluding many groups from the networking and sales opportunities that such membership could convey. Immigrants from other religions were routinely denied the right to form associations. African Americans seeking to form corporations, be they for-profit or nonprofit, were rejected regularly. Given that white-run organizations charged higher rates to blacks than to whites, the inability to incorporate limited black enterprise in the South (Spencer, 1985). Catholics seeking

to form associations were denied on the assumption that any Catholic organization would be controlled by the Pope. Rejection of corporate status for African American organizations was common in the North and the South: Connecticut refused a charter for an African American school in the 19th century, while southern states routinely blocked organizations thought to promote literacy in African American populations (Hammack, 2002).

The first sixty years of the 20th century saw the rapid growth of nonprofit medical centers and hospitals. Over these sixty years, the percentage of the labor force dedicated to nursing increased by more than a factor of twenty. Nonprofit educational institutions were also cropping up rapidly, supported by funding from the Servicemen's Readjustment Act of 1944 (better known as the G.I. Bill), the National Science Foundation in 1950, and the National Defense Education Act in 1958. While the latter two actions have funneled important funding into the sector, the G.I. Bill altered higher education in such a fundamental way that it merits a closer look.

The G.I. Bill was intended to revitalize the economy, not the veterans, as they returned from war. While the original intention of the bill was to smooth the glut of workers into the economy and to support those soldiers whose education had been interrupted, the bill became a larger measure to support veterans and to honor their sacrifices (Olson, 1973). The interest from veterans in education, as well as the high quality of their academic performance, exceeded all expectations. A program initiated to manage economic challenges and to cope with returning service members turned out to be a massive success for academic institutions and veterans alike. Its influence highlighted the ability of older students who might be married or have children to be successful students, and even to assist in teaching. Universities also discovered that larger classes could still be effective, a shift which led to vast increases in class and cohort sizes which has not been reversed (Olson 1973).

Individuals seeking to form nonprofit organizations fought deep wells of prejudice well into the 1960s. While the discrimination earlier in the century focused on religion, discrimination based on race and gender were still rampant in the second half of the twentieth century. Moreover, incorporation of a nonprofit had to be authorized by a judge, who could capriciously reject a request based on not liking the name of the organization, or deciding that there was not a need for such an organization (Hammack, 2002).

The rapid expansion of the sector has continued since the 1960s, but this expansion is not due to private giving, which has been at a consistent level at roughly 2% of gross domestic product (GDP) since 1960. Hammack (2001) attributes this to the doubling of average per capita incomes in the United States between 1945 and 1990, during which time spending on services quadrupled. Hammack suggests that because nonprofits provide more services than goods, it is reasonable that they would grow along with this economic trend. Federal funding increased yet more dramatically: from 1962 to 1997, federal funding of the areas commonly served by nonprofits increased from 0.4% to 4.44% of the gross domestic product. While some of these dollars could have gone to public or private organizations, the increase by an order of magnitude in funding of areas such as the arts, research, education, health care, and social services created opportunities for nonprofit organizations to be supported financially. The process for incorporating a nonprofit organization became more equitable, allowing a more diverse set of founders to create a more diverse set of new nonprofit organizations, doubling the number of nonprofit organizations per capita over the 20 years between 1970 and 1990 (Hammack, 2001). Government funders became interested in using vouchers rather than direct payment to provide subsidies for education, health care, and indigent care services. The Reagan administration attempted to veil the reduction of funding for direct operating support for social services by suggesting that vouchers would allow every recipient more control over the services received and would open up competition and drive an increase in quality in

the services provided. Along with this effort to create an open market for services that were previously funded by the government, the Reagan administration also promoted devolution: the decentralization of the outlay of public funds from the federal government down into individual states, counties, and towns.

Marwell (2004) points out that in this privatized, devolution-driven, market approach to direct services, demand can often be greater than supply, and service providers spend their time competing with each other for funding rather than providing services. The determination of which organization receives the funding determines the shape of the services provided and can restrict the manner and geography in which services are available. Marwell posits that it is this shift that has driven the massive increase in the nonprofit sector since 1970, and that it has been a cumulative effort of countless legislative actions, not a single bill.

As our current economy struggles to recover from the global recession of 2009, innovation in the nonprofit sector is driven by fears of insufficient resources, both human and financial. However, it is valuable to remember that nonprofit leaders have been worrying about the lack of volunteers since the early 1960s (Hammack, 2001). These fears are valid and important issues for nonprofit managers to consider, but it is also helpful to remember that the sector has been facing these challenges for over fifty years, and has become a larger and more critical component of the American economy over that time. Volunteer workforces have been critical to the nonprofit sector for more than two hundred years. As an integral portion of our national history, volunteering has grown and evolved along with the available and willing volunteer work force.

What do we want from the sector?

With a clearer sense of the nonprofit sector and its unique traits and niches, what do we, as the public served by these public charities, want from the nonprofit sector? I posit that collectively, we want the sector to be efficient and effective while performing essential work.

Essential

To determine whether the mission a nonprofit plans to pursue is essential, we as a society rely on the IRS designation of being a 501(c)(3) public charity to determine whether an organization is performing essential work. Once an organization has obtained this designation, it is equivalent to all other 501(c)(3)-designated non-religious public charities. Tax laws apply similarly to all public charities, even when two charities have diametrically opposed missions (examples of such opposing viewpoints can be found in the areas of reproductive health and substance legality). After all, " 'doing good' is a matter of societal values about which there may be little or no consensus" (p. 222, Kanter & Summers, 1994). Rather than wading into the moral morass of these issues, the federal statutes regarding nonprofits do not distinguish between mission foci.

Defining what work is worthy of being designated 'essential' is a challenging task. Still, the concept that every organization able to obtain and maintain this designation from the federal government's tax-assessing arm is equally worthy is unsettling to many. While this study does not include information about how best to guarantee the essential nature of nonprofit work, the issue is an important one and merits awareness as we strive as a community to strengthen and improve the nonprofit sector as a whole. Despite the importance and value of the challenge of defining 'essential' work, either as an absolute or along a continuum, this question falls outside of the scope of the current study. For the purposes of this project, all public charities in receipt of a current 501(c)(3) designation from the IRS will be considered to be equally essential.

Effective

Measures of efficacy are challenging due to the creativity in the nonprofit sector. A host of different organizations may arise within a relatively narrow mission focus, each with different goals and approaches, leading to different measures of effectiveness. As an example, consider a group of four organizations within the focal area of 'safe after-school activities for high school students.'

Organization A offers tutoring for the ACT college readiness assessment. A team of tutors provide a brief lecture on a given ACT topic before dividing into small groups with students to practice that concept. The tutors have been trained in specific testing tricks and techniques for the ACT. They give the students a sample ACT at the beginning of the year and compare the students' scores on the real ACT to their scores on these practice tests to measure their results. The program borrows space from local public schools and offers free services to the school's students, reducing the organization's total budget significantly. The tutors themselves are volunteers from a local college's student teacher program, so the organization's direct services are very inexpensive to provide. As a result, the organization's administrative expense consumes more than half of their annual budget.

Organization B offers homework assistance. Students can bring any type of homework and a group of tutors determine which tutor is the best match for that student's challenges, and that tutor will cycle through the students who show up on a given day to give them as much guidance as they need during a given time window. Tutors are college-educated and have been given training in working with teens and are offered additional training and support as needed. The shift in student performance has been astonishing, but the cost per student is very high.

Organization C is focused on getting students into college. This program provides no formal assistance with test preparation or current assignments, but guides students through the process of filling out the appropriate applications and other paperwork after helping them identify colleges that

might suit them well. This program offers no academic support, and provides no opportunities for students uninterested in a four-year degree.

Organization D is a community center, providing a safe space for students to come after school to do homework, play sports, or socialize. A group of mentors are present and available and may help to organize activities, referee a basketball game, or set up an arts and crafts activity. The cost of the building is extremely high, and since the building is old it requires frequent repairs which impose large burdens on the organization's fundraising staff.

All of these organizations are providing service which may be extremely helpful for different students. Because they are offered through the nonprofit sector rather than the public sector, they can differentiate the clients they are willing to serve. The fact that they are nonprofit corporations does affect who they serve: they may turn away low-income clients in favor of those who can pay more. Unlike public sector organizations, they can discriminate among their potential clients based on traits such as the clients' religion. After the passage of George W. Bush's first presidential executive order creating the Office of Faith-Based and Community Initiatives, nonprofits discriminating not only between clients but also between potential paid staff members on the basis of religion became eligible for federal funding (Urban Institute, Vita, & Wilson, 2001). One can imagine the different ways in which these organizations could be assessed. Since the percentage of budget going to programs is a frequent metric for organizational assessment, Organization A could be ineligible for funding due to its conscientious efforts to keep program costs low – resulting in an apparently large overhead rate. Organization B could be disregarded due to its high cost per student, though it is the most adaptive, flexible, and responsive solution. Organization C will be helpful to a certain group of students, but depending on the demographics and priorities of the supporting community, this may not be a fit. Organization D faces ongoing site costs consuming large chunks

of its budget. Whether or not these expenses are considered program expenses, they are likely to continue to consume organizational resources at such a rate as to restrict the organization dramatically.

Additional Challenges in Measuring Efficacy

Beyond the variety of potential approaches to mission, nonprofits face a broad array of stakeholders with differing interests. Clients, and often their families in the case of children's services and some medical services, a plethora of funders with varying priorities, internal staff, board members, and governmental bodies all have individual demands (Kanter & Summers, 1994). Further, the stated goals of these organizations may not be measurable for twenty years. In the example of the after-school programs, they might all state that their mission was to prepare students for happy, successful lives. This presents the challenge of somehow documenting what a happy, successful life might look like, and how it might be measured. Even if a standard for a happy, successful life is constructed, the organization would need to find a way to measure it in the present. Further, the organization would need to control for other environmental factors that could influence a happy, successful life. It is not hard to see how evaluating nonprofit efficacy can appear impossible.

Efficient

In the for-profit world, the efficiency ratio is the percentage of revenue consumed by expenses, with lower ratios being more desirable (Busco, 2009). In the nonprofit world, efficiency is more difficult to express. In a services industry, the state of the inputs to an organization is highly relevant. For example, a hospital in an area with higher average income may have more families who have enough disposable income to allow them sufficient free time to exercise and to cook healthy food, and may live near safe parks where children can play. This hospital may have higher success rates with their patients due to the healthier patients coming through the door, as compared to a hospital in a lower-income neighborhood. Moreover, a hospital in a higher income area may have more successful

fundraisers due to the higher income of the users of that hospital. Therefore, without measuring the 'inputs' – the health of the incoming patients – for the hospital, measuring efficiency based on outcomes could penalize hospitals unjustly. An additional example can be found at competitive colleges: the students applying to these schools have already achieved so much that they are likely to be successful adults with or without the college experience. To appear successful and efficient, a university can accept only those students who have already paved their own paths to 'success,' however the university chooses to define success.

Moreover, these swings in the state of the clientele of an organization may vary with the economy. For example, demand at food banks may increase when the economy is in poor shape, thus causing an increase in demand for services just as funding sources are drying up. At first blush, measuring the percentage of need met might appear to be a metric of efficiency, but the double whammy of increased demand combined with reduced funding could cause additional damage to the very organizations helping a community come through a crisis. Given that nonprofits are expected to hold social values over financial values (Kanter & Summers, 1994), an argument can be made that nonprofit organizations may need to damage their financial positions to benefit their clients during times of crisis.

Given the challenges of measuring efficiency from a financial perspective, what other information can we gather about the work of nonprofits that will be valuable in assessing their efficiency? Many organizations rely on comparison to other members of their organizational field, in an approach based in institutional theory (DiMaggio & Powell, 1983). This approach allows little flexibility for different models, such as the examples of after-school programs cited above. Moreover, it can have the effect of stifling innovation. Organizations are usually at their most innovative shortly after launch, and over time the same forces that drive innovation begin to drive institutionalization

(Kimberly, 1979). Comparison to peers is one of these forces. Thus, the very forces seeking to allow measurement of efficiency can push out innovation and trigger stagnation. By comparing an organization either to similar organizations or to itself in previous times can lead to abandonment of work past a given level. Such procedural approaches can cause staff to see a previous year's achievement as a quota, and to reduce effort once this point has been reached (Kanter & Summers, 1994). This was an issue raised by many teachers when the No Child Left Behind Act was implemented: the teachers were forced to spend a disproportionate amount of time 'teaching to the test' and working with low-performing students, leaving little challenge or even supervision for students who were not struggling with these standards (Darling-Hammond, 2007). The result of the implementation of these standards was to reduce the opportunities for learning for the more gifted students, and to abandon those students deemed unable to pass the tests.

Searches for a single theory of effectiveness for the nonprofit sector as a whole have been fruitless (Forbes, 1998). The diversity of missions encompassed by the sector, complicated by the variety of approaches taken to serve those missions, creates a setting in which performance comparisons between organizations are challenging. Since those supplying the funding rarely receive the output from the organization (Shapiro, 1973), supporters must rely on feedback from the administration. In the absence of a simple performance metric, different funders often use different metrics. As a result, diversity in funding streams may increase administrative workload as nonprofit staff members seek out information to meet divergent reporting requirements from a variety of funders. The work of gathering the information and formatting it for each of these various reports falls into the organization's administrative or fundraising functions, and by consuming resources that could otherwise be directed towards mission-centric activities, reduces efficiency.

Often inefficiency stems from the very flexibility that allows nonprofit organizations to meet their missions. The opportunity for a staff member to take time away from a traditional role to assist a client may be the critical component in the client's success. Daniel J. Cardinali, CEO of Communities in Schools (CIS), notes that the success of the CIS program is due to their ability to meet the needs of the students (Cardinali, 2014). Sometimes that means finding a quiet place for homework, and sometimes it might mean finding clothing that is clean enough not to be embarrassing for the student. Since each student has unique needs, there is no clear way to define the efficiency of this work. In one month, maybe all the challenges can be met with phone calls; in the next, extensive travel and in-person work may be required. The students with more extreme challenges may well be more expensive to serve, but the social good accrued by helping these students may lead to greater community benefit down the road. These may be the most 'efficient' dollars spent by an organization because they may be serving a student who would otherwise wind up as a larger community cost. Again we see that by prioritizing social values over financial values (Kanter & Summers, 1994), nonprofit organizations may appear to be grossly inefficient by strictly financial metrics.

Organizational Sustainability as an Indicator of Efficiency for Investors

A publicly traded corporation has an easy, visible metric by which to measure success from an investor's perspective: the net value of the firm as quantified by the share price multiplied by the number of extant shares. Simplistic as this sounds, the visibility and easy comparability of these metrics allows investors to assess the sustainability of an organization, and to make assumptions about the quality of the work the company is performing. The roots of this study grow from the fertile questions raised by the David and Lucile Packard Foundation about how best to invest in the nonprofit sector, so examining the for-profit sector from an investor's perspective is the appropriate comparative view. For-profit corporations may have additional goals beyond profit and may receive

benefits from accolades, but the most commonly-used metric to determine success for investors in the for-profit marketplace continues to be net value (Krantz, 2012).

Given that non-profit organizations are prohibited by law from raising equity capital (CommunityEnterpriseLaw.org, n.d.), such comparisons become much more difficult to make. While few individual donors will spend time researching an organization before donating (Hope Consulting, 2010), organizational funders such as public and private foundations, corporations, and government grantors will usually have particular goals in mind when they support a nonprofit. As a result, different funders will request different information from nonprofit organizations, creating additional administrative burden for the nonprofits receiving funding from multiple sources with varying reporting demands. The funders are not making these demands to create artificial work for the nonprofits: rather, they are adhering to the teachings of management guru Peter Drucker who explained that if an organization is to meet its goals it must have "clear targets, the attainment of which can be measured, appraised, or at least judged" (p. 103, Drucker, 1980). These funders acknowledge that in order to meet their goals, they must have metrics aligned with the funder's goals, not simply the recipient organization's goals. The variety of funders and the myriad of goals they hold can create a reporting nightmare for nonprofit organizations able to obtain funding from diverse sources. As illustrated with the examples of after-school programs in the previous chapter, even organizations with apparently similar missions and foci may have divergent approaches requiring differentiated reporting approaches. Identifying funders with goals as similar as possible to an organization's mission will help reduce this burden, but perfect overlap of organizational goals may be difficult to achieve.

One way to mitigate this administrative burden is to focus fundraising efforts on a single fundraising stream or a certain type of donor. While many nonprofits are very successful in this approach, they

run greater risks of insolvency if an event strikes their preferred funder type more severely than others (Gronbjerg, 1993). Volunteers constitute one of these streams of support, though their contributions are not directly financial in nature. A diversified set of funding streams decreases financial risk, but may increase administrative work to meet the reporting requirements of a diverse set of funders (Gronbjerg, 1992). If diversification is positive, how can nonprofits diversify their funding streams while minimizing the increase in administrative effort to meet diverse reporting needs?

To mitigate the burden that funders place on nonprofits through their reporting requirements, some efforts have been made to standardize the communication tools used by nonprofits to inform their funders and their communities of their progress. The public nature of an organization's federal tax return on Form 990 filed with the Internal Revenue Service (IRS) each year has been a step towards transparency, and web-based services such as Guidestar (www.guidestar.com) have improved accesses to these resources. An additional communication vector which is becoming more common is a logic model (J. A. McLaughlin & Jordan, 1999; W.K. Kellogg Foundation, 2001). By describing the process through which a nonprofit plans to convert its inputs into its intended outputs in the short and long term, a logic model can drive the generation of a standardized set of metrics based on the nonprofit organization's goals and processes that may also meet the needs of many of its funders. Though these qualitative tools may help to explain the connection between program activities and the organization's long-term vision, they still require time and thought from an interested reviewer to convey relevant information. The quest, therefore, is to identify a metric that can crisply convey the relevant fiscal status of a nonprofit, in hopes of encouraging donors to verify the solvency of the nonprofits into which they invest, thus reducing friction in the nonprofit system by channeling funds into organizations that will survive for long enough to invest those donations wisely in mission-focused work. Such a metric would not overemphasize growth beyond inflation, as

increased net financial value is not the primary measure of a nonprofit organization's success: rather, that organization's efforts towards its mission define its success. Further, the metric would give the broader community a sense of how financially resilient such an organization would be in the face of an economic shock. With this information, funders can either shore up organizations in which they believe in an effort to ensure their long-term viability, or can select sturdier institutions to support. Just as missions vary, so do funders; different supporters are drawn to organizations in different states of financial health. Thus, the desired metric would provide output along a continuum, to allow organizations to assess themselves longitudinally while allowing potential donors to compare the financial health of various organizations in an informed way.

Individual Donors Do Little Research

As of 2010, more than half of all charitable contributions came from the wealthiest 30% of individuals, with less than a fifth as much support coming from foundation grants (Hope Consulting, 2010). Only one-third of these donors would be willing to donate to a new cause, and the average amount of research done is under two hours, usually seeking simple quantitative data, usually derived from the organization's most recent filing of Form 990. Thankfully, the data on revenue and expenses filed on Form 990 has been shown to be quite accurate when compared to audited financial statements (Froelich, Knoepfle, & Pollak, 2000) . The most sought-after statistic is the percentage of overall organizational funds dedicated to programs (Hope Consulting, 2010). While financial support of programming is critical to an organization's success, there are a host of factors which may distort this statistic.

For example, in some mission areas it is much easier to recruit volunteers to perform program work than to perform administrative work. In mission realms such as food banking, the sorting and distribution of food is an unskilled task that can be handed off to volunteers with a broad array of physical health with little training. Groups may come in from offices, social clubs, or churches to

perform tasks such as opening cartons of food and inserting a set number of items into each of several containers for distribution. Habitat for Humanity has made extensive use of volunteers for years in its building projects. In child-oriented mission foci, recruiting volunteers from local retirement homes has been an effective way to increase the ratio of caretakers to students while keeping program costs low. An organization that dramatically improves recruitment to fill these jobs in a given year may see a large decrease in their program expenses, and may choose to invest those dollars to strengthen administrative portions of the organization. Such a shift, triggered by improved business practices, would cause a decline in the program spending of the organization. A donor looking only at this one statistic – the percentage of expense originating in program activity – would consider this program weaker due to the reduced employee cost from improved volunteer recruitment.

Organizations such as Austin Partners in Education (www.austinpartners.org) bring committed groups of volunteers into local schools to deliver small-group instruction to students in struggling schools. Since the great majority of their 'program staff' is made up of volunteers, their program delivery expenses are relatively low. In each of these cases, volunteers are providing critical program services and support, but based on their balance sheets, this reduction in expenses on the program side will detract from their appeal in the eyes of donors. Ironically, the scrutiny of the percentage of expenses stemming from the 'programs' category as reported on an organization's Form 990 filing can create disincentives to save money and safeguard resources in program delivery. Further, initiatives such as program management, program evaluation, and strategic planning would fall into the 'administrative' expense category. Such focused attention on a single ratio can cause nonprofits to avoid essential oversight and planning tasks for fear of alienating potential donors. That said, the focus of donors on this statistic prior to making a contribution has led to this ratio of program expense to total expense to be an important factor in predicting a nonprofit's ability to garner

contributions (Kiser, 1999). One goal of this research will be to seek additional easily-conveyed metrics that could inform donors as to the stability of the organizations and their chances of survival.

Charity Navigator's Assessment Methodology

Charity Navigator (www.charitynavigator.org) has attempted to broaden this perspective somewhat by creating a metric incorporating more components of an organization's management, yet still maintaining the simplicity of a single indicator, allowing a casual researcher a similarly simple single metric by which to compare organizations. To reach such a crisp output as a single number, simplifications and generalizations are necessary. Still, there are challenges with the methodology in use, as there would be with any system expected to reduce the complexity of the entire nonprofit sector into a neat quantitative response. The subscale indicators listed below are those required to receive full credit on each of the subscales. Organizations that do not reach these standards are eligible for less stringent standards to receive scores under the full five-star rating. Still, the standards described herein outline the definition of a five-star nonprofit organization from the perspective of Charity Navigator.

The largest drawback of Charity Navigator's approach is that they only assess large nonprofit organizations. They only evaluate organizations with over $500,000 per year in public support, and more than $1,000,000 per year in revenue (Charity Navigator, 2014b). This metric excludes 82.4% of all nonprofits in the United States (Urban Institute, 2013). One can imagine how limited the usefulness of a reporting agencies such as Consumer Report or the Better Business Bureau would be if they only reviewed products from one out of five companies.

With this limitation in mind, the review process of Charity Navigator is worth examining, as it is the best-known organization attempting to wrestle with this intractable problem of conveying

comparative information about nonprofits to potential donors. Bearing in mind that organizations with similar missions may take varying paths to that mission, Charity Navigator incorporates more information than the simple 'program versus overhead' ratio most commonly used by donors. Their metric includes the following seven categories: program expenses, administrative expenses, fundraising expenses, fundraising efficiency, primary revenue growth, program expense growth, and working capital ratio. The sum of the scores from these subscales is added together, and the nonprofit is given a ranking on its overall score, from zero to five stars. Each of these metrics has a valid reason for being included in the metric, as well as limitations to be considered.

Charity Navigator will give a zero-star rating to any organization spending less than one-third of its revenue on programs. In the organizations they review, they have found that nine out of ten organizations incur at least 65% of their expenses on programs. Since the IRS will not recognize volunteer time on Form 990 as a donation, I suggest that there could be organizations using volunteers to perform so many of their tasks that the majority of their expense is in the administrative back office. Still, according to Charity Navigator, if such organizations were able to grow to this scope they would be given zero stars due to their "gross inefficiency" (Charity Navigator, 2014a).

To receive a top score on administrative expenses, most organizations must keep their administrative spending under 15% of total expenses. Food banks and other food distribution services must keep their administrative cost under 3%. By contrast, museums may have administrative overhead of up to 17.5% and still receive full credit in this category. Charity Navigator indicates that these percentages are based on historical analysis of organizations in these mission areas (Charity Navigator, 2014a).

Fundraising efficiency is measured by comparing fundraising income to fundraising expense, and top scores are allocated to organizations able to raise a dollar by spending for less than a dime. For public broadcasting and media, this rate doubles due to the expense of the air time needed to raise money, while for community foundations and food distribution systems this rate drops to three cents.

When measuring primary revenue growth, Charity Navigator breaks findings down into 34 mission-based subcategories, such as International Peace, Libraries, and Wildlife Conservation. Each carries an expected annual growth rate, averaged over recent fiscal years, of between five and ten percent to reach the full score. This metric assumes that positive growth is an important component of nonprofit health, even for these very large institutions. One could easily imagine a wisely-managed library or museum with a consistent support base that has achieved balance with its surrounding community and has no need to grow beyond its extant revenue needs. The assumption that a nonprofit is not healthy simply because it is not growing at ten percent a year – a rate nearly three times the highest rate of growth the national economy has experienced in the last decade (The World Bank, 2014) – has no stated research grounding in the Charity Navigator methodology. It is reasonable to expect a nonprofit to increase its revenue at a rate which approximates the greater of two factors: the rate of inflation (Bowman, 2011) or the rate of increase of its expenses over time. Beyond this rate, additional growth may not align with the strategic vision of the nonprofit, or of the donor.

In measuring program expense growth, Charity Navigator expects program expenses to lag revenue growth. As an example, to attain full points a humanitarian relief organization must maintain program expense growth at a level under three percent, while total revenue growth is expected to be over five percent. Even in an organization with 100% of revenue dedicated to program expenses,

this metric would expect an organization to raise $1.67 for each dollar spent on programs… at a minimum (Charity Navigator, 2014a). This expectation seems unreasonable, especially given that both of these metrics are averaged over a national recession.

The working capital ratio of an organization is the ratio of its liquid assets to its expenses, and can be used to calculate the amount of time a nonprofit would be able to exist at its current spending rate on its current cash. In this category, Charity Navigator considers eleven categories separately after suggesting that nonprofits in general should keep one year's worth of liquid assets available. For educational organizations this expectation rises to three years, and community foundations are expected to maintain 5 years' worth of available assets to qualify for top ranking in this category from Charity Navigator. There is also a caveat mentioning that any organization with more than $250 million in working capital will receive full credit in this category. This stipulation, added casually into the description of this standard, suggests how inaccessible such goals are for almost half of the nonprofits in the nation which are operating on annual budgets under $100,000. Further, I would suggest that many donors want to feel that their dollars are needed, and that contributing to an organization while knowing that one's dollars will not be filling a relatively urgent need would add a challenge to the work of an organization's development staff.

Charity Navigator is providing a valuable service for donors. Their comparative research allows casual donors to select between organizations within a given mission focus without seeking 990s for each organization and calculating financial metrics. Just like any snapshot, the metrics they capture convey certain information without giving a holistic view of organizational health. Still, given that the vast majority of nonprofits within the United States are unlikely to attain the scale needed to reach Charity Navigator's thresholds for analysis, other metrics are needed to evaluate the health of smaller nonprofits.

Financial Sustainability

Though maximizing net assets is not the primary goal of a nonprofit organization, the fact remains that an organization must find ways to obtain enough resources to provide services if it is to make progress towards its mission. Bringing in funds may appear to be a distraction from the mission, but without it the mission will fail. While Charity Navigator's strong preference for aggressive growth favors large organizations working hard to become larger, they are not the only metric emphasizing growth rate. Two additional financial measurement structures also share the view that growth is a critical component of nonprofit financial health, and award more favorable results to organizations growing more rapidly.

Bowman felt that the extant models in 2011 were divided into those based on portfolio theory that assessed financial strength on a very long term basis with an assumption that services should be maintained or expanded over time, and those based on financial metrics that assessed financial strength at the moment of analysis. To bridge this divide, he created his capacity and sustainability model (Bowman, 2011) and explained that this tool could be adjusted by an organization to shift focus appropriately between short- and long-term analysis. However, his model biases both its short-term and long-term metrics on growth with higher scores attributed to higher growth rates. The capacity and sustainability metric is intended to consider the growth of an organization over time, emphasizing both current and future positions in a longitudinal assessment. Bowman points out that the choices of the levels at which to hold these metrics is left to the discretion of the organization's management, which may be true when the metric is calculated for internal use as a reference against previous years' performances. In contrast to Tuckman and Chang's (1991) Financial Vulnerability Index, he argues that this tool is intended to reflect financial performance over both the short and the long term.

Bowman's strong bias towards growth may be appropriate for internal analysis for some organizations. Given that the scope of analysis for this study is the Recession of 2007-2009, the long-term element of his model is not relevant. The focus for this study is on resilience in the face of an economic shock. The foundational assumption in the long-term component of Bowman's model states that programs, as reflected by program spending, should remain steady or increase in the long term. For broad-based sector analysis, this model overemphasized the importance of financial growth.

Zietlow's Financial Health Index (Zietlow, 2012) utilizes measures of financial solvency, liquidity, and financial flexibility. The measure is based upon fifteen separate measures rolled up into four distinct components of the score, and requires information beyond that supplied on Form 990, unlike Charity Navigator and Bowman's capacity and sustainability model. While this may be a valuable resource for internal use, it is too complex and relies too heavily on internal information to be useful in a broader context. For the purposes of this study, the preferred metric needed to have three traits: to be calculable from publicly available data, to be relatively unbiased towards growth, and to be applicable to organizations of varying sizes. The logic behind these traits is explained below.

First, metrics calculable from publicly available data reduce debate about the accuracy of the numbers being used to calculate the metric (Froelich, et al., 2000). Prior to releasing financial information in a 990, the organization's senior executive must sign the document affirming the data to be accurate. Executives know that these documents will be published and available for all to see, and that funding decisions will be based on these documents. As a result, externally released information is relatively reliable (Froelich, et al., 2000). Thus, a metric based on these externally

available numbers will not only entail less effort to obtain, but will also base the metric on the most verified information available.

Second, nonprofit organizations strive to reach their missions, not to grow financially for the sake of financial growth (Sessoms, n.d.). Nonprofit organizations do not necessarily need to be increasing their financial assets each year in order to be striving efficiently and effectively to meet their missions. Therefore, the desired metric need not include a requirement for net asset growth. This pressure towards growth is an artefact of the metrics the nonprofit sector has borrowed from the for-profit sector (Tuckman & Chang, 1991). Due to recognition that not every nonprofit organization is seeking to grow as part of its long-term vision, the metric should focus on financial flexibility and viability, rather than on financial growth for the sake of growth. Third, the data set under consideration includes organizations spanning a wide range of sizes. To examine these organizations fairly, the metric would not penalize an organization for its size. In return, this test will examine the predictive value of the metric as a bellwether of an organization's ability to survive a recession. The applicability of the metric to organizations of varying sizes is important given that the organizations in the sample to be studied vary dramatically in size from under $200,000 in annual budget to over $10 million.

Financial Vulnerability

The metric which seemed best suited to this use and has been researched in the nonprofit sector is Trussel and Greenlee's (2000) modification of Tuckman and Chang's Financial Vulnerability Index (1991).

Tuckman and Chang created the Financial Vulnerability Index (FVI) to identify those nonprofits that would be at risk during a financial downturn. Their article describes the importance of the nonprofit sector as a segment of the economy and as a provider of services, the challenges of

measuring the output of the sector. They explain that their goal is not to assess overall health, but rather to determine which nonprofits would need to curtail their programs abruptly in the face of an economic shock (Gronbjerg, 2001). Due to the exploratory nature of their work, the authors do not create an absolute scale such as that used by Charity Navigator, but rather a relative scale in which an organization ranking in the lowest quintile of the sample in a given criterion is considered to be 'at risk' in that realm, while organizations in the lowest quintile in all four criteria are classified as 'severely at risk.' To avoid this issue of relativity, Greenlee and Trussel (2000) created an absolute metric with cutoff values for financial health, questionable financial viability, and financial risk. Further information about the evolution of the FVI and the data it provides will be provided in the Methodology section of this document.

Community Engagement: Theoretical Grounding

Regardless of the challenge of quantifying the exact financial value of volunteers, (Handy et al., 2000; Handy & Srinivasan, 2004), this study operates from the assumption that volunteers provide value to the organizations they serve. My proxy variable representing these ties is the organization's score on the Community Engagement Index (CEI), developed by Rehnborg and Poole (2010). The content of the CEI grew out of an examination of organizations that engaged volunteers effectively. As a result of this analysis, a holistic view of organizational activities spanning the boundary between the organization and its surrounding community emerged. Thus, while volunteer theory forms the starting point for the theoretical framework of community engagement, organizational capacity theory and community-building theory play essential roles in augmenting the scope of consideration of the study.

Volunteer Theory

Any discussion of volunteer theory should begin by defining how volunteering differs from other activities. Much like the description of nonprofit versus for-profit organizations, definitions may

become foggy near the boundaries. Differentiating between helping and volunteering can be challenging when a volunteer activity grows out of a helping activity. Many nonprofit organizations grow out of a small committed group of friends deciding to work together on an issue due to some personal link to that challenge. At what point does such a project transition from helping to volunteering? If the volunteer is receiving something of value in return, such as social contact or new skills, does this still qualify as volunteering? Herzog and Morgan (1992) suggest that one reason for the undervaluing of both helping and volunteering has been driven by decades of societal undervaluing of the work of women. As a result, little effort has been expended to assess the value of volunteer work to our society as a whole. They discovered that while productive time between the genders was equal, women spent more time in unpaid labor than did men. For this study, Herzog and Morgan looked at three categories of activity: paid work, unpaid work at home, and help provided to others. Volunteer work was included in this third category, as well as tasks such as mowing the lawn of an infirm neighbor or bringing items to a sick friend. Their analysis found that the work of women in sum was as productive and as valuable as that of men, though the compensation was lower due to the nature of the work they perform, such as child care, home maintenance, and helping activities (Herzog & Morgan, 1992). Thus, volunteering is not inherently less valuable to the community as a whole than paid work, but the value accrued from the work is given to the community rather than to the volunteer. Something drives people to give, a force named altruism by the philosopher Auguste Comte to describe what he saw as our highest goal in life (Mill, 1875).

The findings of Herzog and Morgan, when taken with Comte's words, suggest that altruism is driving members of our society, more women than men, to choose to give one of their most valuable resources – their time – to another individual or group out of a drive away from egoism and thus personal comfort.

Musick and Wilson state that "volunteer labor will *always* be necessary to help government agencies achieve their goals" (p.4, Musick & Wilson, 2007), and describes the differing logic from varying points on the political spectrum supporting the importance of voluntary efforts. It was the breadth of support for a better understanding of volunteering, and of the organizational characteristics which support volunteers effectively, that drove the Corporation for National and Community Service to commission the creation of the original tool from which the CEI is descended. Further, the reduction of civic engagement and the decline of social associational activity have weakened our democratic process by loosening the social bonds which hold communities together in common interest. As these bonds fray under the pressure of increased work hours and increased use of technology for connection and expression, volunteering provides an opportunity for individuals to connect with groups and thus to increase their social capital (Musick & Wilson, 2007).

In their earlier work, these two researchers had come upon a definition of volunteering that addressed the issue of defining the scope of volunteerism. They posit that "volunteer work, unlike the labor market and the informal sector, is uncommodified; unlike household labor, it is freely undertaken" (p. 694, Wilson & Musick, 1997). They explain that informal helping, such as of an infirm neighbor, is a component of volunteering, but is a different activity and will be treated in their work as a separate category from formal volunteering. Moreover, they clarify that volunteers may receive benefits from their work, and that they may be altruistically motivated, but that this does not impinge upon the voluntary nature of their efforts (Wilson & Musick, 1997). The fact that volunteer work is not coerced is one of its central tenets; in fact, the lack of coercion to participate is a differentiator throughout the nonprofit sector. In defining the differences between the public and nonprofit sectors, the inability of a nonprofit to coerce participation from volunteers or from clients sets it apart from the public sector, wherein participation may be required (Frumkin, 2009). The fact that the public sector will occasionally allow nonprofit volunteer service to sate an obligation which

would otherwise be fulfilled by imprisonment is interpreted by critics as a blurring of this boundary separating the sectors.

Effective volunteer management must be predicated on a deep comprehension of the motivations driving volunteers. Wilson and Musick (1997) outline four defining traits of volunteer work. First, it is productive: there is value produced for some individual, group, or entity. Second, it involves multiple people to some degree, either through multiple individuals working on an issue or multiple people benefitting from the volunteer work done. Third, it involves the ethics of the volunteer who is driven by a moral force, regardless of the benefit the volunteer may accrue from increased positive visibility, new skills, or invitations to join social clubs. Fourth, the authors suggest that helping and volunteering are related, and that volunteers may see them as substitute activities (Wilson & Musick, 1997). In other words, the CEO who chooses to pick up litter in a park over the weekend may be less likely to agree to serve on the board of a nonprofit because she has fulfilled her helping role for the time being. This aligns with a common criticism of social media awareness campaigns at the moment: the argument is that by allowing people a way to legitimate their self-image as a caring and involved citizen by typing an update on Facebook or tweeting about a certain issue will fulfill that person's desire to help. As a result, people are making statements on social media rather than writing letters to politicians, attending rallies, or donating money to a cause (Oremus, 2014). By allowing people to feel that they have fulfilled their moral duty and satisfied their need to see themselves as engaged and concerned, such campaigns lead to awareness but little action. If a person can post a video of being chilly for a few minutes after having ice water dumped on his head rather than donating $100, the person's friends may enjoy the video more than they would care if the friend made the donation but the organization would probably benefit more from the $100 than from the video. Wilson and Musick discovered another example of this substitution in their data: they discovered that time spent in prayer was negatively associated with helping behaviors in women.

One hypothesis is that religious women are expressing their devotion to their faith through prayer rather than through charitable action.

Since volunteers are not paid at market value for their work, Wilson and Musick identify a set of motivating factors that drive volunteers: the desire to be productive, to connect with others in a positive way, to express one's moral self, and to balance this opportunity with other forms of helping. An organization hoping to create and maintain an effective relationship with volunteers would be wise to keep these motivators in mind. If volunteers are giving their time to feel that they are performing important work, they may not be satisfied with the classic task example of stuffing envelopes. Determining the type of social experience the volunteer seeks will be relevant: whether this individual is seeking social interaction through volunteer work, or whether the individual is more focused on the audience being served. Understanding that the volunteer is seeking a way to express or demonstrate a moral code may drive volunteers to seek recognition. Thus volunteer managers and other staff members may need to openly and publicly thank volunteers so that they feel their work, and through it their ethics, have been noticed. By contrast, volunteers who are seeking to learn new skills, or look for new social contacts, may not be as focused on public recognition of their work. Finally, effective volunteer managers will need to recognize that other helping behaviors may attain higher priority than their organization at times. Acknowledging this from the beginning may make it easier for volunteers to return after hiatuses. The issues addressed by the CEI (Rehnborg & Poole, 2010) are shaped by these defining traits of volunteer work.

Writing about volunteer work has focused in three main areas: quantifying the impact of volunteers, improving volunteer management, and the work of specific groups of volunteers such as the board of directors or an event planning committee. Little research has been done on the impact of the relationships a nonprofit organization forms with its surrounding community through volunteer

involvement, partnerships with other corporations in its organizational field, and the leadership culture of the organization. By perceiving nonprofit organizations as open systems (Scott & Davis, 2007) the authors of the CEI open a new perspective on voluntary engagement, and raise interesting questions about these community ties. Effective volunteer management yields greater benefit to the organization internally (Hager & Brudney, 2004), but what about time spent in collaborative activity? Does participation in projects such as continua of care and collective action groups support a nonprofit organization? Does serving as a resource for the media garner additional benefit for a nonprofit? Is the leadership culture of an organization significant in the extent to which a community will come together to support that organization in a time of crisis? These and similar questions are better addressed through the frame of community-building theory and organizational theory.

Community-Building Theory

Community-building theory occupies a position on the border between for-profit and public sector work. Most frequently, community-building is discussed in the same context as community action and community organizing, when attempting to gather a broad base of support for revitalization of a community or a component thereof, such as its school system or public safety network. In this context, however, community-building is serving in a manner more similar to the for-profit idea of brand awareness and engagement. An assessment of a brand's community-building efforts would be based on answering the following question: how well are we connecting with and maintaining links to the people on whose good graces we depend? In the for-profit world, an organization able to keep customers happy will have an advantage over competitors without this skill. In the nonprofit world, if an organization has not found a single funding source willing to meet all its needs indefinitely, the interaction component is more challenging due to the diversity of the groups needing to be satisfied with the work of the organization.

In the *Handbook of Action Research*, Senge and Scharmer (2006) state that community action is founded in the theory of learning communities. These challenges are under scrutiny in the online learning industry, as educational institutions attempt to replicate the bonding experiences students share in face-to-face environments in online groups. Brown (2001) found community-building to be a three-step process. First, a space had to be available for individuals to connect in which communication was valued and protected. This space had to be available for continued interaction over time, which built camaraderie. Next, the community created its own set of behavior guidelines and followed them: language towards other members was positive, requests for help were answered promptly, and individuals shared relevant experience when it was helpful to others. Finally, these conditions allowed a community to form in which participants felt accepted, valued, confident, and connected (R. E. Brown, 2001). Creating opportunities for participants to discover common experiences and identifiers is an essential component of community-building (R. E. Brown, 2001; Senge & Scharmer, 2006).

These conditions do not arise naturally. Nonprofit organizations hoping to build communities of support must intentionally craft, maintain, and guard these communities. Like any resource, communities that are only engaged during a time of crisis will be unlikely to pull together to help; for a nonprofit to build and maintain support from a community, that nonprofit must commit to ongoing communications and forums for interaction among that community.

While a casual observer may wonder why a nonprofit would not be taking the time to invest in community connections, it is important to remember the multitude of publics a nonprofit organization must sate on a regular basis. In addition to keeping clients sufficiently content to continue using the nonprofit's service, multiple types of donors with differing priorities must be

kept informed in the manner they prefer, staff members' needs must be met, and perennially limited funding must be allocated carefully in the face of competing needs.

In this delicate dance, organizations allocate varying amounts of their time, resources, and energy to developing and maintaining strong links with the community outside their doors. Some organizations choose to maintain an introverted focus, attempting to serve clients as efficiently as possible without extending their attentions to other organizations in their mission focus, their local region, or both. This approach was more common prior to the prevalence of Internet access, when research on similar organizations took special effort, especially to learn about those outside of their immediate region.

Extroverted organizations expend their resources in building connections to other individuals, groups, and resources, sometimes without a clear sense of what the return on those expenditures will be. Staff members are given time away from their work to participate in partnerships, conferences, and other collaborative efforts. Justifying these expenditures can be challenging. Conference attendance is often classified as a training expense, though the casual conversations and networking between attendees often provide benefit beyond the information delivered in formal presentations (Johansen & LeRoux, 2013). Even though the private sector invested at least $46 billion in training in 2004 (Mikelson & Smith Nightingale, 2004), most funders prefer to contribute their dollars to direct services rather than overhead expenses and have unrealistic expectations of how low overhead levels can be kept (Gregory & Howard, 2009; Wing, Hager, Rooney, & Pollak, 2004).

Some of these explorations and activities would be considered research and development in the for-profit world, a segment which consumes a little less than 3% of the Gross Domestic Product (GDP) of the United States (The World Bank, 2012), though for the most innovative 1000 companies in the

nation that number rises to roughly five percent of corporate budgets (Strategy&, 2014). For-profit corporations recognize that continued investment in refining their offerings and determining the future needs of their clients is critical. Community engagement activities feed this need for information: as an active member of an 'organizational field' (DiMaggio & Powell, 1983), organizations interact more frequently, establish patterns of dominance and collaboration, increase data flow to all organizations, and the organizations acknowledge that they are part of a common field. The organizational field is defined by the interaction, commonality of data, and peer acknowledgement of the field. In a rural area, the organizational field may encompass all nonprofits in all mission foci; in a large city, the organizational field may be far more limited. DiMaggio and Powell do not discuss the approximate number of organizations in an organizational field, which leads to the suggestion that an organization may be a member of several organizational fields. As an example, a local YMCA branch may participate in a field of local YMCA peers, a field of fitness peers, a field of national YMCA peers in similar cities with similar demographics, a field of local children's services peers, a field of local low-income services, a field of faith-based organizations, a field of senior citizen service providers, and several others. Such an organization could benefit from innovations in service delivery or program tuning from each of these groups.

An additional component of community-building for nonprofit organizations falls into the 'marketing and communication' budget of many for-profit organizations. Because the buyer in the for-profit market (Porter, 2007) pays for the good or service received, there is a short feedback loop in customer satisfaction. As social media and online reviews of companies grow more common, corporations are receiving more immediate feedback today than in previous decades. In the nonprofit sector, however, payers and clients are separated (Oster, 1995), and there is little to no feedback between funders of a nonprofit and the clients who benefit from that nonprofit's work in most cases, as payers and recipients have been split into two separate groups. As a result, the quality

of the nonprofit's services is mostly unknown to the funder. This absence of a way for the payer to determine the quality of the good provided is one of the three creators of the market gaps nonprofits exist to fill (H. B. Hansmann, 1980). In this context, a funder has no way to assess the relative quality of the services offered by the candidates for funding. Without a way for funders to compare details of the services being provided (such as incremental quality of services, or alignment of organizational values to the funder's personal views), a funder should be drawn to the least expensive service, assuming that this service will be the most efficient. In the absence of further information about the quality of service, funders would be expected to fund the least expensive program that meets their mission focus or philosophical area of interest. This logic leads nonprofits to do everything they can to keep their costs low in order to survive – even if this diminishes their efficacy. Exercises such as evaluation would be additional costs that would not improve their odds of survival, and as a result should be cut from the budget. Community-building activities are often victims of these cuts. To counteract this, some funders request evaluation materials or provide their own evaluation framework, as does the Bill and Melinda Gates Foundation (2015).

In a for-profit firm, the profit margin acts as a litmus test for corporate success in the eyes of investors. In the nonprofit world, a clear metric for success to inspire donors and grantors is more challenging to assemble. Concrete measures such as fundraising success and effective fiscal management must be balanced with more nebulous concepts such as community engagement and client impact. For nonprofits with missions seeking long-term change, creating assessments which balance not only short-term and long-term impact as well as concrete and abstract goals can seem overwhelming.

In the context of community engagement, the goal around which the community is being built is the mission of the nonprofit organization in question. Much like community organization in a

geographic context, community-building around a certain organization and the cause it represents has many components. Many of the same skills required to energize a community around a given political issue are needed to connect a community to a nonprofit's mission.

Organizational Capacity Theory

Organizational capacity theory is an attempt to measure the capabilities of an institution to make progress towards its goals. With the push towards devolution and the transition of safety net services from government providers to nonprofit providers, nonprofit organizations have taken on additional responsibilities and reporting requirements (Alexander, 1999). In many cases, they may be expected to serve larger or more diverse audiences than they originally incorporated to serve. Unlike government service providers, nonprofits can be formed to serve very narrow groups. Nonprofits incorporate to serve a given mission which may or may not align with the greatest needs of the community surrounding it. O'Connell (1996) gives the example of an ambulance service. While such a service could form as a nonprofit organization, it would be the responsibility of the government to ensure that all residents had access to some ambulance service. The voluntary organization may choose to accept fees for services from the government, but the obligation to ensure broad service provision is a government responsibility, not a voluntary one.

Reporting obligations also vary between the public and voluntary sectors. The concept of tighter collaboration between these two sectors can appear frightening to the surrounding populace for two reasons: differing reporting standards and reduced responsiveness to community feedback (Fredericksen & London, 2000). The concept of government funders outsourcing human service provision to the nonprofit sector has led to the suggestion that this link is building a hollow state, shutting out community voices and needs in favor of collusion between the public and nonprofit sectors (Fredericksen & London, 2000). If nonprofit organizations are depending on the public for fees and contributions to keep their doors open, they have a vested interest in keeping their

communities happy with their work. If, however, their funding comes from governmental sources, they have a vested interest in serving public sector interests and priorities.

Structure of Study

This exploratory study began with an examination of the financial performance of the Texas nonprofit organizations that had completed the CEI in 2010. Financial metrics were examined before and during the Great Recession, from 2000 to 2012. The proxy variable for financial performance was the organization's score on Greenlee and Trussel's (2000) Financial Vulnerability Index (FVI) in alternate years, while the proxy variable for community engagement was the organization's score on Rehnborg and Poole's (2010) Community Engagement Index (CEI).

The details of the manner in which these tools were used to analyze financial sustainability and to explore its potential relationship with community engagement will be addressed in the next chapter of this document.

Chapter 3: Methodology

The intention behind this study was to consider whether additional information about nonprofit organizations could aid individual donors of time and of money in selecting recipients of their gifts. Do metrics describing the financial sustainability and volunteer engagement strength of nonprofit organizations contribute valuable information that is not captured by standard financial analysis? Do organizations that manage their finances well tend to engage volunteers well?

This exploratory study examined the relationship between financial resilience and community engagement in the context of a widespread economic shock. I examined the relationship between the strength of a nonprofit organization's community connections and its financial performance during a financial shock. My proxy variable representing community engagement was the organization's score on the Community Engagement Index (CEI), developed by Rehnborg and Poole (2010). I performed secondary analysis on the pool of completed CEI responses received in 2010. My proxy for financial resilience was the organization's score on Greenlee and Trussel's (2000) modified version of Tuckman and Chang's (1991) Financial Vulnerability Index (FVI). To understand the financial performance of these organizations prior to the Great Recession, I calculated their FVI for alternate years beginning in 2000, and concluding in 2012, yielding up to seven FVI values for each organization. I used this information to consider the following research questions:

Research Question 1: How did the Great Recession of 2007-2009 affect a purposive sample of nonprofit organizations in the state of Texas?

Hypothesis A: Older organizations were less affected by the financial downturn due to the reputational bias of age.

Hypothesis B: Larger organizations were less affected by the financial downturn due to the larger sizes of their budgets.

Hypothesis C: Controlling for findings from age and budget size, human services organizations showed lower FVI values than their peers in other NTEE categories, both during and after the Great Recession, mirroring national trends.

Research Question 2: Did CEI scores in 2010 show any relationship with FVI scores in 2008, 2010, or 2012?

Sample for Study: CEI Completers from Fall 2010

The pool of organizations examined in this study was defined by the group of organizations that completed the CEI in the fall of 2010. The respondent group consists of three subsamples: one from affiliates of the OneStar Foundation in Texas, one from affiliates of the Literacy Coalition of Central Texas, and one from veterans' services organizations in northern Texas. The OneStar Foundation selected 176 organizations to receive the survey, from which 115 usable responses were collected. The Literacy Coalition of Central Texas affiliates completed 29 usable surveys, while 35 veteran-serving organizations submitted usable surveys. Surveys were made available online and were completed online. In most cases, only one completed survey was received from each organization. In the cases where more than one survey was received, mean responses were used for each question after averaging individual responses. The final data set includes organizational responses to the CEI from 125 nonprofit organizations, based upon 179 individual responses. While the group does not share a single mission focus, these organizations were all operating within the state of Texas during the same time frame. The indices selected are intended to be mission-agnostic.

FVI Data Source: Form 990 Filings

One of the benefits of the FVI is that it is based on information from an organization's filing of Form 990 with the Internal Revenue Service. Given that research has shown such data to be quite accurate (Froelich, et al., 2000), this proxy variable was based on relatively reliable information. The information needed to calculate an organization's FVI is publicly available for those organizations that file Form 990 with the IRS.

Beginning with the list of 125 organizations that completed the CEI in 2010, I sought filings of Form 990 for the years of 2000, 2002, 2004, 2006, 2008, 2010, and 2012. As I searched for the Employer ID Numbers (EINs) for these 125 organizations, ten had ceased to file 990s. This does not necessarily mean that their programs are no longer active: they may have combined operations with another public charity, or they may have re-incorporated under a different section of the tax code. An additional seven organizations had invoked the IRS exemption for religious organizations. Seventeen organizations filed either the 990-EZ or the 990-PF, alternatives to the full 990 that do not provide sufficient information to calculate an FVI. To maintain a consistent geographic focus within the state of Texas, I excluded branches of national organizations that did not file independent 990s. Four organizations rolled their information into a 990 filed in a state other than Texas, and thus were excluded because their responses would not reflect conditions specific to this geographic region. Further, their financial data would be diluted by the information from other branches across the nation, and they would therefore not be relevant when addressing the second research question which includes consideration of the CEI, which was completed only by Texas branches. Since these other branches might differ meaningfully in leadership culture, marketing and communication, and volunteer training and their input had not been considered in the responses given in 2010, these organizations were excluded. Moreover, these organizations would be reporting financial information from a geographic region outside of the scope of this study, thus diluting the financial

results relevant to this study. I also excluded organizations that were individual departments or projects of large organizations such as universities based on similar logic. Six organizations that completed the CEI were responding on behalf of individual projects within individual schools of large universities, and their contribution to the financial vulnerability of the entire university was clearly minute. One organization was a project run by the government of a foreign nation and therefore did not file a 990, and was excluded for this reason. These exclusions are summarized in Table 1 below.

Figure 1: Reasons for Exclusion from Sample

Reason for Exclusion	**Number of Organizations Excluded**
Filed a 990-EZ or -PF	17
Defunct or no EIN	10
Religious mission, no 990 filed	7
Small project inside large institution	6
Branch of a national organization	4
Project run by gov't of another country	1
Total	**45**

After these exclusions, 80 organizations remained in the sample. Of these 80 organizations, most had not filed a full 990 every year. In fact, only 29 organizations had filed consistently in each of the years being assessed. Twenty-two of the organizations were not incorporated until 2001 at the earliest, and a total of 32 organizations show intermittent filing records. Thirteen of the organizations that received their public charity designation from the IRS after 2000 filed full 990s consistently after their first 990 filing. This could indicate that in certain years, these organizations had gross receipts totaling less than $200,000 and a balance of total assets at the close of the filing period of less than $500,000, the organization has the

option of completing the 990-EZ instead of the full 990 (Internal Revenue Service, 2014c). Given that 35 of the respondent organizations had total assets of less than $500,000 in 2013, it is plausible that in some years, an organization elected not to incur the extra work of completing the longer Form 990 when it was not required. In some cases, however, the consistently large size of an organization's financial position suggests that the missing 990s may be due to issues in the reporting or digitization process.

Figure 2: 990 Filing Patterns

Filing Pattern	**Number of Organizations**
Consistent filers in all seven time periods:	29
Organizations incorporated in 2001 or after:	22
Consistent filers from 2008 – 2012 (CEI timeframe):	50
Consistent filers after first filing of full 990:	13
Inconsistent filers:	32
Total Organizations Represented:	80

Among these smaller organizations that could have fallen beneath the full 990 cutoff requirements is the Round Rock Area Service Center, which filed a 990 with under $64,000 in assets in 2000 and $147,000 in assets in 2002. In both these years, the organization's revenue ($1.3 million in 2000, and $208,000 in 2002) required the filing of a full 990. The steep decline in revenue suggests that the lack of a 990 for 2004 for this organization may be due to a diminution in assets and revenue obviating the need of a full 990. The Dallas Leadership Foundation also may have fallen below the cutoff for the requirement of a full 990, with revenue of $276,762 and assets of $218,000 in 2002. In 2006, the organization had $1.23 million in revenue and $934,000 in assets. Given that the organization has such variance in its revenue and had barely exceeded the revenue requirement for the full 990 in

2002, it is not outlandish to imagine that the organization could have fallen beneath the threshold in 2004.

By contrast, consider Lifetime Recovery, an organization with a full 990 on file for 2000 and 2004 but none for 2002. In 2000, the organization had assets of $542,000 and revenue of $1.46 million. In 2004, the organization had assets of $489,000 and revenue of $1.40 million. It would be surprising, though not impossible, for the organization to have suffered such a loss of revenue as to cause it to fall below the $200,000 mark in 2002. In this case it seems more likely that the 990 is missing from the data set due to an issue in the digitization process, or possibly due to a late filing or other administrative issue along the chain of custody of the information. I looked at the values in 2000 and 2004 for the other components of the FVI such as the ratio of administrative expenses to total expenses to evaluate whether I could interpolate a value to fill this hole in the data set. Unfortunately, these values diverged to such a degree that I did not feel that interpolation would be valid. Management expenses in 2000 were $80,938 out of a total expense budget of $1.15 million. In 2004, management expenses consumed $241,000 out of a total expense budget of $1.31 million. I could not identify a value for an interpolated management expense with sufficient grounding to fill this gap. While other organizations had similarly large budgets with missing 990s, the data for the various components of the FVI varied sufficiently to make generation of a fully interpolated FVI a guessing game rather than an academically grounded mathematical exercise.

To address these data consistency issues, I obtained 990 data from the two major sources available: GuideStar's Premium Search (GuideStar, 2015) and the Urban Institute's National Center for Charitable Statistics (National Center for Charitable Statistics, 2015). GuideStar's website provides access to the three most recent filings of Form 990. Where possible, I used these resources to fill gaps in the digitized data received from these two sources. Since these data were collected in 2015

and the 990 is usually filed on an annual basis, this resource was helpful in filling some of the gaps in the 2012 information, but had little to contribute to the information from 2000 to 2010. The bulk of the data upon which this study is based was drawn from a customized data download from GuideStar, delivered on 30 January 2015.

At first glance, one might be surprised to see the 990-PF form listed. After all, the PF is intended for private foundations, not for public charities. However, organizations which have yet to meet the 'public support test' will incorporate as private foundations to begin. Once the organization either garners at least 33 percent of its support from the general public or from income from its mission-related activities, the organization may petition the IRS to ask that its status be changed from private foundation to public charity (Internal Revenue Service, 2014b). The public support test is calculated on a five-year rolling average, so an organization may waver above and below passing the public support test from year to year.

The Great Recession

In 2007, a financial bubble in the housing market in the United States collapsed, triggering a financial shock which has been labeled the Great Recession (Elsby, Hobign, & Sahin, 2010; Palley, 2011). As housing prices dropped precipitously, homeowners found themselves owing more on their homes than the homes were worth. In the first years of the millennium, banks were requiring low down payments on houses and providing low-interest mortgages for the first few years that would later require much larger payments to maintain. This lack of regulation and oversight combined with the collapse of the housing bubble to trigger a run on investment instruments (Financial Crisis Inquiry Commission, 2011). The impact of this collapse was felt around the world. Despite the National Bureau of Economic Research, the official arbiter of the United States' economic status, declaring that the Great Recession concluded in June 2009 (National Bureau of Economic Research, n.d.), income inequality has continued to grow through 2012. In fact, the richest 10 percent of the

population of the United States have reaped 116 percent of the income growth garnered between 2009 and 2012, since the bottom 90 percent of earners have seen their income decline on average (Tcherneva, 2014). The Great Recession affected nonprofit organizations: high net worth households decreased their giving by roughly 35 percent, while the largest individual donors shrunk between 2000 and 2009 (Grusky, Western, & Wimer, 2011). Nonprofit organizations felt the pinch: more than half saw drops in contributions, with one third of grantmakers reducing their giving. These drops in giving occurred simultaneously with an increase in need: 59% reported increases in demand for their services(McLean & Brouwer, 2009).

This economic crisis provided a context within which to examine financial vulnerability and resilience in the nonprofit sector. The study began with analysis of financial stability in individual nonprofit organizations in 2000, calculating FVI scores biennially from 2000 through 2012. The first four of these FVI scores were expected to provide a sense of how the nonprofits fared during an economic recovery cycle, following a brief economic down cycle in 2001 (National Bureau of Economic Research, n.d.). The FVI scores in 2008 were expected to indicate how hard the Great Recession hit the various organizations, while the 2010 and 2012 FVI scores documented the organizations' financial performance after the crisis.

Instrumentation: CEI

The CEI has been through several iterations and refinements (Poole & Rehnborg, 2012). Originally created at the behest of the Corporation for National and Community Service, the goal of the original tool was to identify the characteristics of organizations engaging volunteers well. Focus groups were convened to answer questions about the essential traits of well-run programs and projects engaging volunteers. The 239 statements resulting from these focus groups were assessed through concept-mapping software which grouped them into eleven topic areas. The items within each topic were condensed and refined to create the Volunteer Program Assessment Tool, or

VPAT. After pilot testing and feedback, the VPAT was shown to have strong internal consistency. In the second wave of testing, the internal consistency reliability analysis yielded Cronbach's alpha coefficients of 0.90 or higher for 7 of the ten scales, and alpha coefficients above 0.80 for the remaining three scales. Criterion-related validity was verified through comparison with the Organizational Assessment Process from the Colorado Trust (1996). The coefficients of correlation between related constructs were found to be in the upper moderate to large range (Martináas & Reguly, 2013) when forty-one participants took the OAP as well as the VPAT.

Next, the instrument was updated, edited down to 191 items, and distributed to 1,187 volunteer-utilizing organizations as the Tool for Improving Programs (TIPS). With the data from this round of utilization, the tool was refined down to the 132-item Volunteer and Community Engagement Capacity (VCEC) instrument, and was administered to groups in two states through affiliations with foundations and coalitions. The data gathered in this round of administration from 449 respondents representing 401 nonprofits was used to refine the instrument yet further, to its current form as the Community Engagement Index, or CEI (Poole & Rehnborg, 2012).

The 52 items of the CEI are grouped into five dimensions gauging an organization's capacity for community engagement. While the CEI is currently under copyright protection, further information about the index and the questions contained therein may be obtained by contacting the RGK Center at the LBJ School of Public Affairs at the University of Texas at Austin. The tool overall carries an alpha of 0.96 (Cronbach, 1951), suggesting very strong consistency within the tool: in fact, this level exceeds the threshold for clinical testing (Bland & Altman, 1997; Nunnally & Bernstein, 1994). This high alpha level suggests that the concepts addressed within the CEI are closely connected. Given the rigor with which the CEI was created, it is not surprising to see that the alpha coefficient is so high. This gives researchers comfort that the concepts and principles share a common latent factor.

While such a high alpha may suggest to some researchers that further questions could be eliminated, the CEI serves a second purpose: it acts as a list of suggestions for areas of improvement within an organization. Staff members who take the CEI have found its individual questions to provide fodder for thoughts of organizational improvement, and have requested printed copies of the tool to keep for later inspection. Therefore, the researchers have decided to maintain this high level of internal consistency rather than look for further questions to eliminate, as the areas addressed by the current questions are important areas of organizational capacity (Rehnborg, 2014).

Next, the criterion-related and construct validity of the CEI were examined. The Colorado Trust's Organizational Assessment Process, or OAP (Colorado Trust, 2002) was used to test concurrent criterion-related validity in conjunction with TIPS, the instrument from which the CEI was derived. In areas of overlap between TIPS and OAP, Pearson coefficients were moderate to strong at a statistically significant level ($p \leq 0.05$) between overlapping subscales. Further comparisons to similar instruments would be helpful. However, instruments assessing nonprofit organizations on such a variety of topics are rare. One instrument from the private sector that strives to provide similar information is the Core Capacity Assessment Tool (CCAT). While this is one of the most commonly used organizational assessments in the nonprofit sector, its lack of an academic grounding or available statistical analysis renders it unsuitable for academic purposes. To address this issue, the authors of the CCAT have partnered with the authors of the CEI to create the Service Enterprise Diagnostic (SED) tool.

Goodness-of-fit testing has also confirmed the construct validity of the CEI (Poole & Rehnborg, 2012). With a Tucker-Lewis Index of fit (TLI)(Tucker & Lewis, 1973) of 0.97, a relative fit index (RFI) (Bollen, 1989) of 0.96, and a comparative fit index (CFI) (Bentler, 2011) of 0.99, the CEI passed these three goodness-of-fit tests, each of which carries a cutoff value of ≥0.95.

Subscales of the CEI

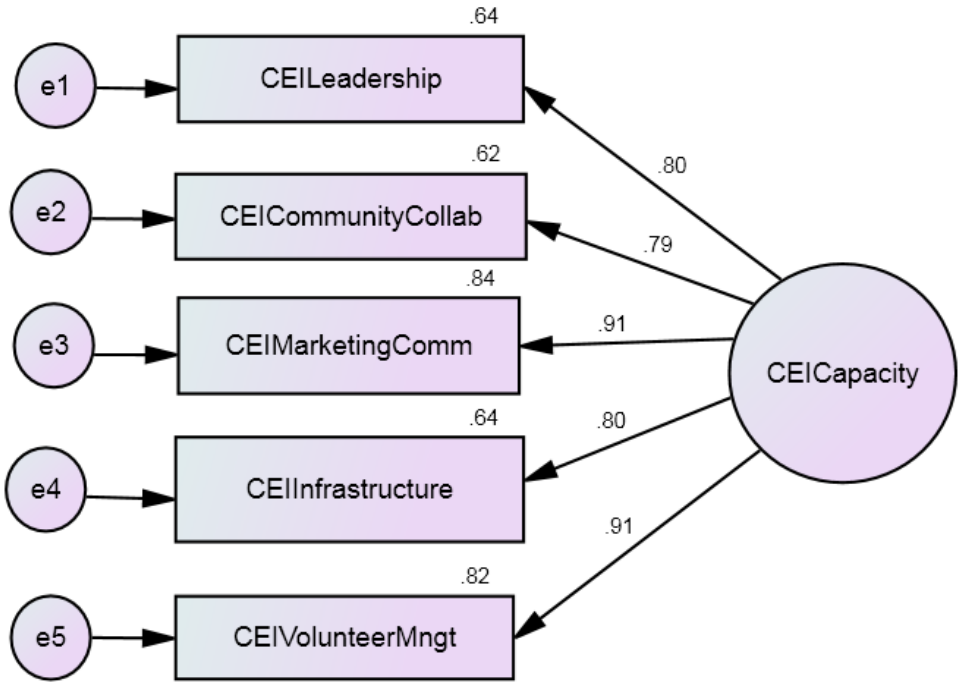
Given that the CEI was created as an instrument to describe organizations that engage volunteers effectively, it is not surprising to begin a discussion of the theoretical framework behind the tool with volunteer theory. However, as Rehnborg and Poole continued their work, they discovered that the keys to effective volunteer engagement transcended the experience of the volunteers themselves. In addition to considering the appropriate management of many types of volunteers utilized by a given organization (Hillman, Withers, & Collins, 2009) in such an assessment, the researchers realized that effective connection to volunteers went beyond the doors of a nonprofit. As a result, volunteer theory was a starting point for the theoretical framework underpinning the tool, though organizational capacity theory and community-building theory were soon integrated. Components of each theory are woven throughout the varying subscales of the tool.

The five subscales of the CEI are Leadership Culture, Community Collaboration, Marketing and Communication, Infrastructure, and Volunteer Management. Two themes are apparent upon examining the tool. First, each subscale contains frequent references to volunteers, due to the tool's foundation as a resource to assess volunteer engagement. Second, there is a strong focus on relationships between volunteers and paid staff. Effective community engagement is built from the inside of an organization out into the community, and must also permeate an organization from the board, through the leadership team, and out to every person working for the organization whether they are salaried or not (Ellis, 1996).

The five subscales within the CEI, the number of items in each subscale, and their respective alpha ratings are as follows: Leadership Culture (12 items, alpha = 0.91), Community Collaboration (12 items, alpha = 0.90), Marketing and Communication (8 items, alpha = 0.85), Infrastructure (8 items, alpha = 0.77), and Volunteer Management (12 items, alpha = 0.88). The test-retest reliability of the

tool was also tested through an assessment of results between two sub-samples from different states, and no statistically significant difference was found (Poole & Rehnborg, 2012).

Figure 3: CEl Instrument Model



These five subscales serve as indicators, contributing to the latent factor of community engagement capacity. The values indicated along the arrows show the regression weights, or factor loadings, of each of these factors. The values at the top right of each subscale show the squared correlation coefficients (R^2) associated with each variable. According to Cohen (1988) these coefficients all represent large effect sizes as they have values over 0.80 with the exception of community collaboration's loading rate of 0.79, which is very close to the 0.80 cutoff for a large effect size. The root mean square error of approximation (RMSEA) value of 0.07 meets Steiger's (2007) criterion for acceptable model fit.

Financial Vulnerability and the FVI

In creating the Financial Vulnerability Index (FVI), Tuckman and Chang (1991) sought to create an indicator of a nonprofit organization's ability to survive financial shocks without reducing the scope or quality of the programs it offers. They defined a reduction in services as a reduction in the dollars dedicated to programs following a financial shock. The variable used to define program expenditures was the dollar value from this cell in the organization's filing of Form 990 with the IRS. As they were creating an exploratory metric, they did not create absolute metrics to determine the presence or absence of financial resilience, but rather utilized the FVI as a relative instrument, comparing organizations within their sample to other subsets of the sample. They subdivided their sample in several ways to explore the relevance of the information supplied by the FVI.

Tuckman and Chang divided their sample by mission focus to compare apples to apples, and repeated each stage of analysis within each mission focus. Their diversified metric included four criteria, assessing four areas of the organization's financial status: equity balances, revenue concentration, administrative costs, and operating margins. The authors did not consider organizations with less than $25,000 in annual gross receipts, though given that they were analyzing data from 1983 tax returns, this is not as small a value as it sounds today. In 2014 dollars, this would be an annual budget of about $58,500 (MeasuringWorth.com, 2014).

Tuckman and Chang found that the results between mission foci varied meaningfully. Their six mission categories were Religious, Educational, Health care, Charity, Support, and Other (Tuckman & Chang, 1991). Of the entire sample, sixty percent of the severely at-risk organizations were support organizations, which include United Way organizations, community chest organizations, educational and athletic foundations, as well as hospital foundations. Health care organizations accounted for another one-fifth of the severely at-risk organizations, while the last one-fifth were religious organizations. Only nine percent of the sample of 4,730 organizations fell into the Charity

category, which includes most of the missions usually considered under 501(c)(3) heading. Examples from this category include rehabilitation services, food banking and distribution, international aid, free legal assistance, poverty alleviation services, and family planning.

In both the examinations of the entire sample and the mission-specific examinations, about one-tenth of one percent of the organizations were found to be severely at-risk, while roughly forty percent of the sample was at-risk in at least one category but not all four (Gronbjerg, 2001). However, given that the standard for vulnerability was based on a relative scale as compared to other organizations, it is possible that all these organizations were healthy or were vulnerable; these were simply the most vulnerable members of the sample.

To avoid this issue of relativity, Greenlee and Trussel (2000) modified Tuckman and Chang's approach slightly. Drawing in metrics from the for-profit sector used to determine the credit-worthiness of firms, they determined that they would consider a nonprofit financially vulnerable if its program expenses decreased annually over a three-year period. (It is worth noting that for some organizations, this may be due to improved program delivery approaches, better volunteer recruitment or retention, or another source of increased efficiency.) Further, the definition of a financial shock was difficult to operationalize in a meaningful context, as reasonable people may have different opinions on what would constitute a financial shock. Thus, Greenlee and Trussel chose to look at organizational program spending over a three-year period as a predictive indicator of financial vulnerability. This decision was based on the work of Gilbert, Menon, and Schwartz (1990) who examined for-profit firms that were financially distressed and used a three-year history of financial performance to differentiate distressed companies that recovered from their financial woes from those that later went bankrupt.

Greenlee and Trussel (2000) did not segment their sample based on mission. They were able to create a model which was 77% accurate in predicting financial vulnerability in their holdout sample. In their study, the least predictive factor of the four components specified by Tuckman and Chang was the equity balance, also known as the operating expense ratio of revenue to expenses. While this predictive rate is useful, they suggest using a three-state test rather than their binary assessment to increase accuracy (Greenlee & Trussel, 2000). Later, Trussel returned to this metric and found that organizations with a drop of at least twenty percent in program expenditures over the course of three years also tended to have more debt, more concentration of revenue streams, lower surplus margins, and smaller total assets than those organizations that were not financially vulnerable (Trussel, 2002). These findings, all of which were statistically significant, validate the relevance of the factors of the FVI.

Limitations

The union of community action theory with organizational capacity theory has not been extensively discussed in the academic literature. Without a solid literature background tying the concept of organizational community engagement to organizational performance, there is little academic grounding for the hypothesis that a connection exists. The concept of an organization as the unit of analysis in a discussion of community action, rather than a neighborhood or a larger population, inverts the usual approach. Normally community action theory is used to examine efforts by an organization to support a population, rather than efforts by a population to support an organization. The injection of volunteer theory lends a valuable perspective to balance this new approach to the examination of community engagement through the CEI.

This study relied on CEI data from only one year: 2010. Conveniently, this year turned out to be at the conclusion of a financial recession. The remainder of the study was constructed around this serendipitous timing. Ideally, CEI data would also be available from these organizations in 2008 and

2012, to allow analysis to control for shifts in the organizations' approach to community engagement over the time period.

Data Analysis

Analysis began with the collection of data from filings of Form 990 for the 80 organizations under examination. Form 990 data was collected from 2008, 2010, and 2012. The factors considered as components of the FVI are as follows:

Equity ratio: This term is calculated by dividing the total equity of the organization by the total revenues of the organization. Higher equity balances are more favorable because they suggest that the organization has financial flexibility in the face of unexpected events. Greenlee and Trussel suggest that while equity may not always be held in easily saleable assets, the presence of these assets improves an organization's ability to obtain loans, and may allow the organization to liquidate additional assets over time (Greenlee & Trussel, 2000). An organization relying on assets such as restricted funds may find itself paralyzed by a need for cash in the face of an economic crisis.

Revenue concentration ratio: This term is calculated by squaring the percentage of total revenue provided by each revenue stream, then summing these values. Thus, an organization with a single revenue stream would have a revenue concentration of 1, while an organization with five equal revenue streams would have a revenue concentration of $(0.2)^2 + (0.2)^2 + (0.2)^2 + (0.2)^2 + (0.2)^2 = 0.2$. Lower revenue concentration ratios are more favorable, as they suggest that an organization has multiple funding sources so that if one is impinged upon, additional sources may be able to make up some portion of the gap. This ratio is an adaptation of the Herfindahl-Hirschman Index of market concentration (Rhoades, 1993). While the FVI considers five funding streams: funds from contributions and grants, program revenue, membership dues, unrelated business income and investment income (Tuckman & Chang, 1991), this calculation will need to be adjusted slightly to

reflect the fact that in 2006, Form 990 was changed and membership dues were included in the same revenue stream as contributions, grants, and gifts. As a result, this term of the FVI calculation should have had five streams in 2000, 2002, 2004, and 2006, but only four streams in the 2008, 2010, and 2012 calculations. However, in examining the 990 filings for these organizations, none of the 29 organizations with a 990 on file in each of the years under examination reported any membership dues in any of those years. One organization from the 50 organizations to be included in the sample for the second research question reported membership dues of less than $37,000 in one year, representing less than one percent of that organization's $6.4 million budget in that year. As a result, the omission of the membership dues information from Form 990, though it represents a deviation from the original structure of the FVI as published (Greenlee & Trussel, 2000; Tuckman & Chang, 1991) does not create a meaningful shift for this sample in the years examined.

Administrative Costs: This term is calculated by dividing administrative expenses by total revenues. Higher administrative costs are positive, as they are expected to indicate flexibility within the organization's budget to allow for cuts in administrative functions prior to cutting program budgets (Tuckman & Chang, 1991). I would suggest that organizations with sufficient funding to invest in administrative expenses may also have had the time and resources to plan for crises, including those of a financial nature. This perspective is in direct opposition to the metrics used by Charity Navigator (2014a). Organizations receive a raw score based upon the percentage of their budget allocated to programs. Higher administrative costs reduce the percentage of budget available for programs. This term may reflect an increase in sustainability at the expense of efficiency. Razor-thin margins may increase the funding available for programs, but they may also increase financial vulnerability in the face of an economic shock.

Operating margin: This term is calculated by subtracting total expenses from total revenue, then dividing by total revenue. Higher operating margins are more favorable. This ratio suggests that an organization is living within its means and is covering its expenses each year with newly raised revenue. Because these terms are calculated from information provided by Form 990, the figures used will include the portion of a multi-year grant that was allocated to the financial year in question.

Using these four factors, Greenlee and Trussel (2000) based their cross-sectional model on financial metrics commonly used in assessments of for-profit organizations. They divided their sample and created a predictive model based on the first segment, reserving the second segment for verification testing. In their model, organizations with an FVI under 0.07 were considered to have "a strong indication of no financial vulnerability," while organizations with a finding of 0.10 or more were considered to have "a strong indication of financial vulnerability" (p. 207, Greenlee & Trussel, 2000). An example of this calculation is included below in Figure 4.

Figure 4: From Predicting the Financial Vulnerability of Charitable Organizations, p.207

The following information is available about XYZ Charity:

Revenue from Source A:	$100,000	Administrative expenses:	$ 30,000
Revenue from Source B:	$300,000	Total expenses:	$300,000
Total revenue:	$400,000	Total equity:	$350,000

Ratio	*Computation*	*Sample Data*	*Ratio Computed*	*Formula Value*
Constant			N/A	− 3.0610
EQUITY	$\frac{\text{Total equity}}{\text{Total revenues}}$	$\frac{350{,}000}{400{,}000}$	0.875	0.1153
CONCEN	$\sum\left(\frac{\text{Revenue source}_j}{\text{Total revenues}}\right)^2$	$\left[\left(\frac{100{,}000}{400{,}000}\right)^2 + \left(\frac{300{,}000}{400{,}000}\right)^2\right]$	0.625	1.2528
ADMIN	$\frac{\text{Administrative expenses}}{\text{Total expenses}}$	$\frac{30{,}000}{300{,}000}$	0.100	−2.2639
MARGIN	$\frac{\text{Revenue}-\text{expenses}}{\text{Revenue}}$	$\frac{100{,}000}{400{,}000}$	0.250	−3.4289

Financial Vulnerability

Probability of financial vulnerability $= 1/(1 + e^{-Z})$, where

$$\begin{aligned} Z &= -3.0610 + 0.1153\,(\text{EQUITY}) + 1.2528\,(\text{CONCEN}) - 2.2639\,(\text{ADMIN}) - 3.4289\,(\text{MARGIN}) \\ &= -3.0610 + 0.1153\,(0.875) + 1.2528\,(0.625 - 2.2639\,(0.100) - 3.4289\,(0.250) \\ &= -3.0610 + 0.1009 + .7830 - 0.2264 - 0.8572 \\ &= -3.2607 \end{aligned}$$

Probability of financial vulnerability $= 1/(1 + e^{-(-3.2607)})$

$= 0.04$

Decision Rules

- If the Prob (FV) > 0.10, then there is a strong indication of financial vulnerability.
- If the Prob (FV) < 0.07, then there is a strong indication of no financial vulnerability.

Prediction: There is a strong indication that this charity is not financially vulnerable, since the probability (0.04%) is less than 0.07.

Greenlee and Trussel specify cutoffs for the absence of financial vulnerability (under 0.07) and the presence of financial vulnerability (over 0.10). Using a single cutoff value of 10 percent, Greenlee and Trussel were able to attain a successful prediction rate of 77 percent: in other words, they successfully predicted which organizations were financially vulnerable in 77 out of each 100 cases in their holdout sample. To improve their chances of success, they created a more graduated approach to financial vulnerability, utilizing a tertiary categorical system including an intermediate realm

between strong indications of financial vulnerability and financial resilience. Given the researchers' acknowledgement of the shaded meanings of FVI values, this study examined the variable both continuously and in coded form based on these cutoffs. Statistical testing and graphing were performed on the index values both in raw and coded form.

Data Analysis Process

Step One: Univariate Analysis of FVI Data

The first step in the analysis was to consider the FVI data independently. FVI scores were calculated at seven points, based on Form 990 data drawn from the years of 2000, 2002, 2004, 2006, 2008, 2010, and 2012. This longitudinal data allowed for analysis of trends prior to the Recession, as well as an opportunity to contrast this performance with financial stability during the Recession itself. The IRS purge of inactive 501(c)(3) public charities in 2011 does not seem to have affected this sample in a meaningful way. In the sample of consistent filers, no organizations with annual budgets of less than $50,000 in 2008 were identified. Had they been, they would have been excluded, based on the approaches used by other researchers (Urban Institute, 2014) including Tuckman and Chang who originally created the FVI (Tuckman & Chang, 1991). Organizations with budgets that dipped beneath the $50,000 threshold in 2010 or 2012 were included in this analysis, just as they were included in the Urban Institute's research. (Organizations with annual budgets under $50,000 may have opted to file form 990-EZ, which would have excluded them from the data set automatically.) Removing these organizations from the analysis would have biased the results away from the organizations most likely to be financially vulnerable. Given that the Urban Institute found that 1.7% of all organizations with more than $10 million in annual revenue prior to the Recession fell beneath $50,000 in revenue during the Recession, the inclusion of these organizations could have provided informative data in all budget ranges (Urban Institute, 2014).

Step Two: Search for Trends in Financial Data

The goal of this analysis step was to identify define the impact of the Great Recession on this sample of organizations, and to determine whether different subgroups of organizations responded differently to the recession. The Urban Institute's findings on subsector closure rates and revenue reduction rates based on overall revenue were expected to be useful as an informative baseline for comparison between subsamples (Urban Institute, 2014).

Several researchers have suggested that organizational age, as reported on Form 990, serves as a proxy for an organization's reputation (Galaskiewicz & Bielefeld, 1998; Robert D. Herman & Renz, 1997, 1998). In this study this assertion that older organizations are stronger and thus will be able to survive financial shocks more smoothly was tested.

> **Research Question 1:** How did the recession of 2007-2009 affect a purposive sample of nonprofit organizations in the state of Texas?
>
> **Hypothesis A:** Older organizations were less affected by the financial downturn due to the reputational bias of age.

Additionally, the assertion that organizations with larger overall budgets reported on Form 990 have greater protection against shocks due to the scope of their budgets was tested. This theory (Cameron & Whetten, 1981; Forbes, 1998; Robert D. Herman, 1992; Robert D. Herman & Renz, 2008; Tannenbaum, 1961; Tassie, 1998) was tested with the following hypothesis.

> **Hypothesis B:** Larger organizations were less affected by the financial downturn due to the larger sizes of their budgets.

Finally, organizational decreases in revenue were compared to the Urban Institute's findings about organizational performance during the Recession (Urban Institute, 2014). In their study, the Urban

Institute performed a logistic regression of two independent variables: NTEE category and organizational size as measured by overall budget, against the dependent variable of active organizational status. NTEE, or National Taxonomy of Exempt Entities, categories divide the sector into ten broad categories: arts and culture, education, environment and animals, health, human services, international affairs, public and societal benefit, and 'other' (Urban Institute, n.d.). They found that of these categories, the rate of organizational closure was highest among the 'other' category. Of the focused categories, the rate of organizational closure was highest in the health and human services categories, both before (2004-2008) and during (2008-2012) the Great Recession (Urban Institute, 2014).

> **Hypothesis C:** Controlling for age and budget size, human services organizations showed lower FVI values than their peers in other NTEE categories, both during and after the Great Recession, mirroring national trends.

Step Three: Univariate Analysis of CEI Data

Next, the CEI findings were considered. The remaining organizations had eight data points: CEI data for 2010, as well as FVI data were available for 2000, 2002, 2004, 2006, 2008, 2010, and 2012.

Descriptive statistics were run on the CEI data to look for outliers, which were considered individually. Next, CEI scores were considered as a group. While the distributions were found to be non-normal, this issue was attributed to the small size of the sample. No outliers were removed due to the reduction of the already small sample that this would have caused.

Step Four: Comparison of CEI and FVI Findings

Next, scores from the two indices were considered jointly to address Research Question 2.

Research Question 2: Did CEI scores in 2010 show any relationship with FVI scores in 2008, 2010, or 2012?

Scores from the FVI in 2008, 2010 and 2012 were correlated against CEI scores in 2010. Additionally, each subscale of each index was tested for correlation against the subscales of the other index. Because this study is exploratory, no predictions or hypotheses were made about any predictive or causal relationships. The goal for this study was to identify correlations that can serve as starting points for future analyses of community engagement and its relationship, if any, to financial performance. The following chapter will describe the findings from this study, as well as the challenges that arose in attempting to answer these research questions.

Chapter 4: Analysis

In the creation and validation of the FVI, the primary research teams utilized far larger data sets than the set I analyzed. Tuckman and Chang used over 4,700 organizations from across the nation, while Greenlee and Trussel included roughly twelve thousand organizations including every nonprofit with over $10 million in assets, then whittled their sample down to just under six thousand organizations (Greenlee & Trussel, 2000; Tuckman & Chang, 1991). I was curious to see how FVI scores would be distributed in a set of organizations in a region of a single state during a global financial crisis: the Great Recession of 2007-2009.

Present and Absent 990 Filings

From the original sample of 125 organizations that completed the CEI in 2010, 45 were removed due to the lack of full and appropriate 990s. For the details of these exclusions, see table 1 in the Methodology section of this document. Information about these 80 organizations from their filings of Form 990 in 2000, 2002, 2004, 2006, 2008, 2010, and 2012 was initially sought through the DataWeb offered by the National Center of Charity Statistics. Access to the DataWeb was funded through the generous support of the RGK Center at the University of Texas at Austin. While the Business Master Files from the DataWeb had much of the information needed to complete the FVI, the amount of an organization's expenses that were allocated to administration – an essential datum to complete the ADMIN term of the FVI – was not included in the Business Master Files. While the Statement of Income report from the DataWeb did include this piece of information, only three of the 80 organizations were included in the set of organizations for which Statement of Income data was available. Therefore, I purchased a custom data pull from GuideStar for each of these 80 organizations for each of the seven time periods to be considered. The final data set of full Form 990 returns included 408 records from this sample of 80 organizations across the seven time periods assessed. Even the 'complete' filings were missing some data. As an example, one hundred of these

filings do not list a value for the number of dollars allocated to administrative expense. Of these, 169 returned FVI scores of under 0.7, qualifying for Greenlee and Trussel's Not Financially Vulnerable, or NFV, classification (Greenlee & Trussel, 2000). The intermediate category which ranges from an FVI of 0.7 to 1.0 included 120 filings, and was not named by Greenlee and Trussel. For convenience I will use the term No Indication, abbreviated NI, to refer to this middle range. The Financially Vulnerable, or FV (Greenlee & Trussel, 2000), classification which includes all FVI scores greater than 1.0, applied to 126 filings. Of these 126, 20 filings returned an FVI greater than 0.2. This data set showed a long right tail, extending up to an FVI of 0.97. However, the continuous variable of the FVI has only been tested in its categorical form. The previous work that forms the foundation for this study was predicated on the FVI as a categorical variable. At the same time, there is additional information to be gleaned from the raw FVI scores in some instances. As a result, both the coded and raw FVI scores will be used in this analysis, with clear definition of which metric is being used.

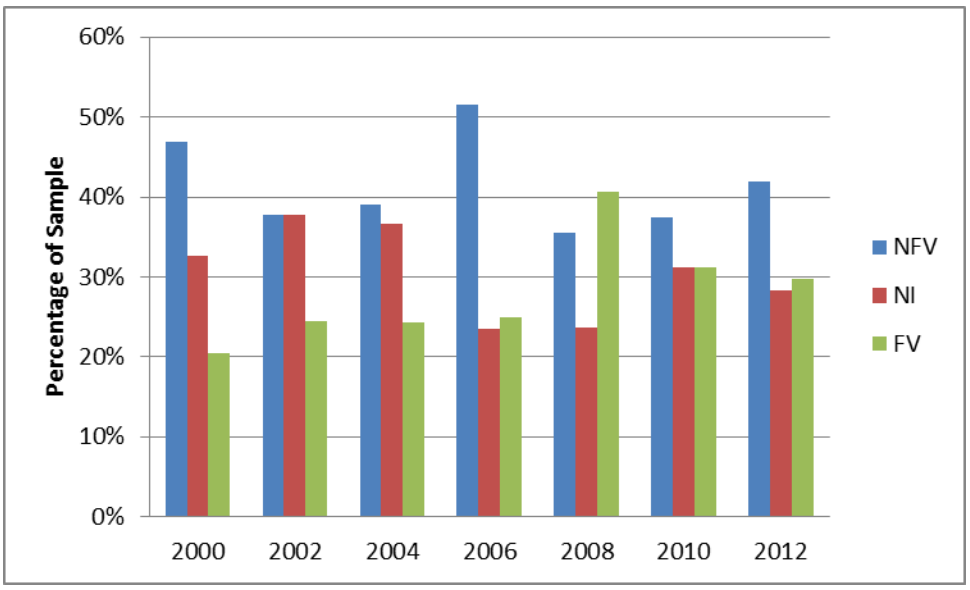
Figure 5: Number of 990 Filings Per Year, Categorized By FVI

Year	NFV	NI	FV	Total
2000	23 (47%)	16 (32%)	10 (20%)	49
2002	20 (38%)	20 (38%)	13 (25%)	53
2004	16 (39%)	15 (37%)	10 (24%)	41
2006	35 (51%)	16 (24%)	17 (25%)	68
2008	21 (36%)	14 (24%)	24 (41%)	59
2010	24 (38%)	20 (31%)	20 (31%)	64
2012	31 (42%)	21 (28%)	22 (30%)	74
Total	170	122	116	408

Despite variance between years, each year has a reasonable number of organizations in each category. However, the increase in the percentage of financially vulnerable organizations in 2008 from 25% to 41%, accompanied by a drop from 51% to 36% of organizations that do not appear financially vulnerable, suggests that this sample felt the impact of a financial shock between 2006

and 2008. While this data set does not provide sufficient information to determine which organizations closed during this period because it does not include information about mergers, the FVI scores of these organizations show that the sample as a whole was more financially vulnerable in 2008 than in the previous years examined.

Figure 6: Coded FVI of Total Sample, 2000-2012



Of the years examined, 2008 is the only year in which more organizations are financially vulnerable than are not. It is heartening to see the sample rebound in 2010 and 2012 to levels which are more similar to their pre-recession levels of financial stability. Further, it does not appear that the IRS revocation of tax-exempt status of inactive organizations in 2011 reduced the number of filings in this sample, as the recorded number of filings in 2012 is the highest in the sample.

Unfortunately, the intermittent 990 filings found in the sample signify that the samples listed in Figure 6 above differ by year. Since only 29 organizations are consistent, the total sample cannot be considered longitudinally. Figure 6 is only an indication that the organizations in the sample fell into all three of the categories defined by previous research on the FVI (Chang & Tuckman, 1991;

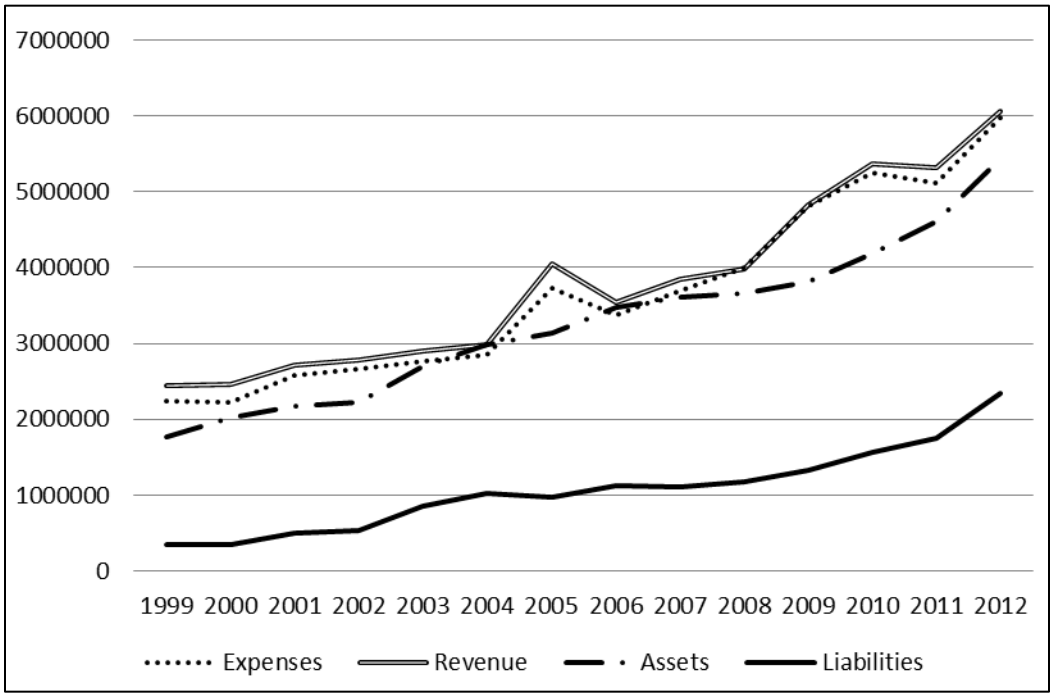
Greenlee & Trussel, 2000). This is a helpful finding, as it allows for analysis between categories, and analysis of organizations that moved between categories over the time span under examination.

2000-2012 Sample of 29 Consistent Organizations

Next we turn to an analysis of the organizations with a 990 on file for each even-numbered year over the time span from 2000 to 2012. A full list of these organizations can be found in Appendix A. First, I began by considering univariate statistics. While there were issues with outliers, the outliers from one time period would regress towards the mean in other time periods. Removing all of the organizations that were outliers in one of the seven time periods would have reduced the sample to less than 20 organizations. With such a small sample, it is difficult to obtain normal distributions on these statistics. As a result, I opted to include all 29 organizations and to leave these statistics in the forms used by previous scholars to study financial stability. Due to this decision, there are issues with skewness and kurtosis in the distributions of the FVI scores in these years. As the figures in this chapter will show, certain organizations showed dramatic deviations from the mean in various years of the time period under examination, and these shifts were visible in the distributions of FVI scores in the seven samples under consideration.

How did traditional financial metrics such as assets, liabilities, revenue, and expenses vary over the time period under examination for these 29 organizations? I include this graph both before (Figure 7) and after inflation adjustment (Figure 8) to show how critical this adjustment is in order to glean a sense of the true trends.

Figure 7: Financial Indicators without Inflation Adjustment, 29 Consistent Filers

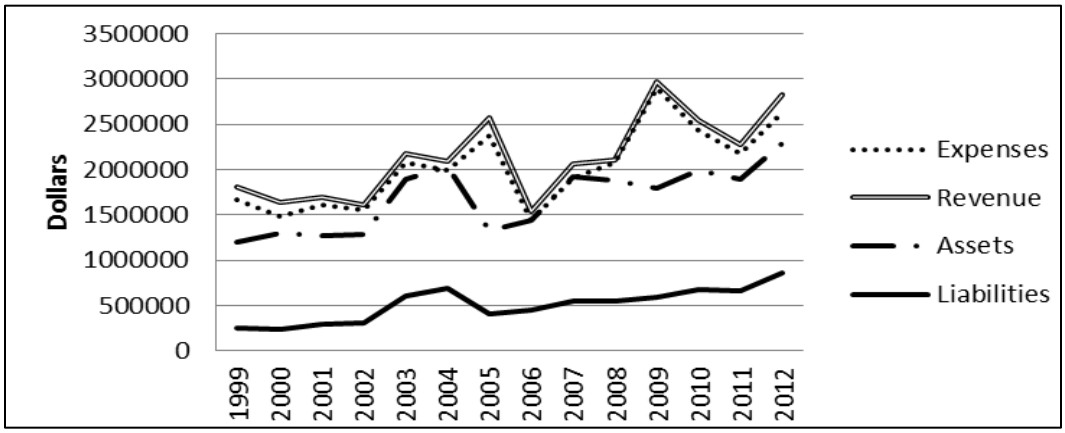


(**Note**: Because Form 990 includes totals for these four indicators for the previous year, charts of these indicators include annual data from fourteen filings ranging from 1999 to 2012. These values were drawn from the same seven filings of Form 990 referenced above.)

(**Note**: For the remainder of this document, this group of 29 organizations will be referred to as '29 Consistent Filers' in figure titles to indicate their consistency in filing Form 990 in the years under examination.)

From Figure 7 it is difficult to see any downturn in the 2007-2009 timeframe. There is a diminution of space between the revenue and expenses lines: they are difficult to distinguish from each other during this time, suggesting that the organization's margin on their operations was compressed during this time.

Figure 8: Financial Indicators, 29 Consistent Filers, Adjusted for Inflation, 2000-2012

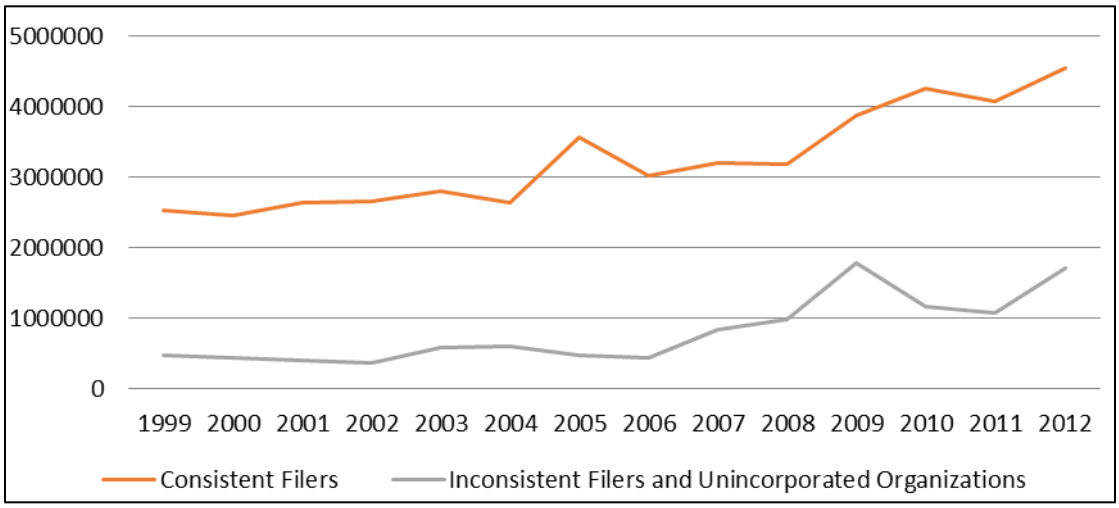


(**Note**: these and all other inflation-adjusted values in this paper are based on inflation rates from the Bureau of Labor Statistics CPI Inflation Calculator (Bureau of Labor Statistics, 2015).)

Before the inflation adjustment, these organizations appear to be growing comfortably. Figure 8 above shows a more tumultuous picture. Interestingly, the 2007-2009 Recession does not seem to materialize in this second graph (Figure 8). The Great Recession will be discussed in greater detail later in this chapter, and in the final chapter. In this inflation-adjusted graph, the level of mean organizational assets decline very slightly from 2007-2009, confirming that despite increases in revenue and expenses, these organizations were seeing no net income from these increased operations. Since the space between the revenue and expenses would represent net income that could be used to build the organization, this dip in assets may suggest that these organizations faced some declines in assets, though this fluctuation was minor in comparison to the drop between 2004 and 2005.

Over the years under examination, these consistent filers also show larger revenue than the full sample.

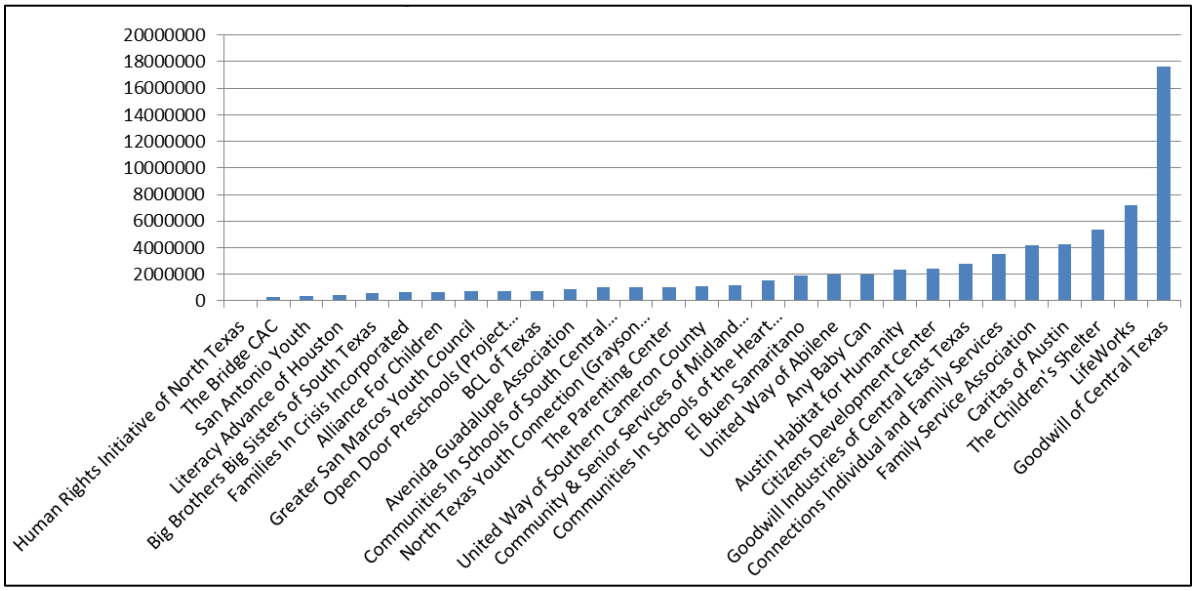
Figure 9: Inflation-Adjusted Revenue Comparison Between 29 Consistent Filers Vs. Inconsistent Filers



Depending on the year, the mean revenue of the consistent filers is between 2.5 and 8 times greater than that of inconsistent filers. In Figure 9, the 29 organizations with consistent annual filings of Form 990 are compared to the 51 organizations with inconsistent filings. To be clear, this group of 51 organizations with 'inconsistent' filings also includes the 22 organizations that had not received their public charity designation until 2001 or later. In other words, not all of these absent filings were unexplained. The inconsistency of the full sample is clearly a factor here, as organizations of varying sizes drop in and out. Still, the fact that the consistent filers show asset levels that vary between half-again as large and twice as large as the total sample is worthy of note. For the remainder of the analysis of this time sample from 2000-2012, findings will be based on these 29 consistent filers to ensure consistent samples.

These 29 organizations range dramatically in size. Below is a figure showing their annual revenue in the year 2000.

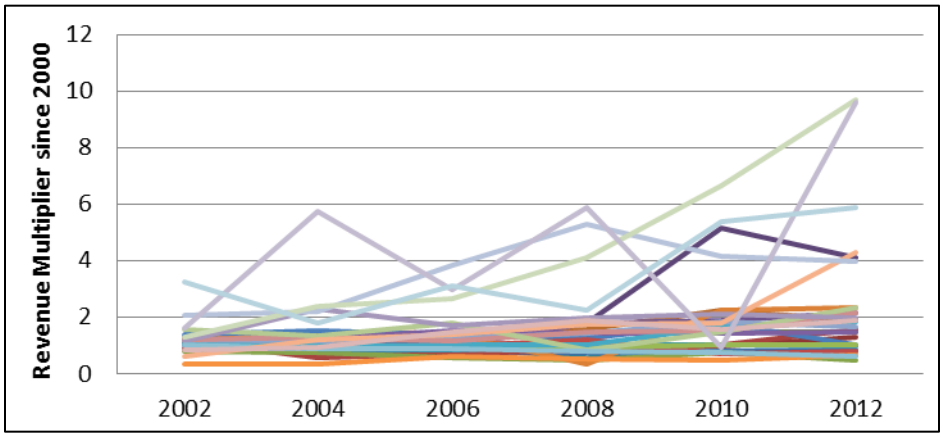
Figure 10: Income in 2000 for 29 Consistent Filers



The exponential shape of the curve of these revenues displayed in Figure 10 is clearly a cause for concern. The largest organization in the sample, Goodwill of Central Texas has an income twice as large as Lifeworks, the second largest organization in the sample. This chart documents the fact that this distribution is not a normal curve, and that skewness and kurtosis are issues for this distribution. Given the small size of this sample and the fact that the exponential curve of the data is not limited to a single case (Lifeworks' income is 30% greater than that of The Children's Shelter, the third-largest organization in the sample, which is in turn 25% larger than that of Caritas, the fourth-largest organization), excluding outliers would not be a productive approach to addressing this issue.

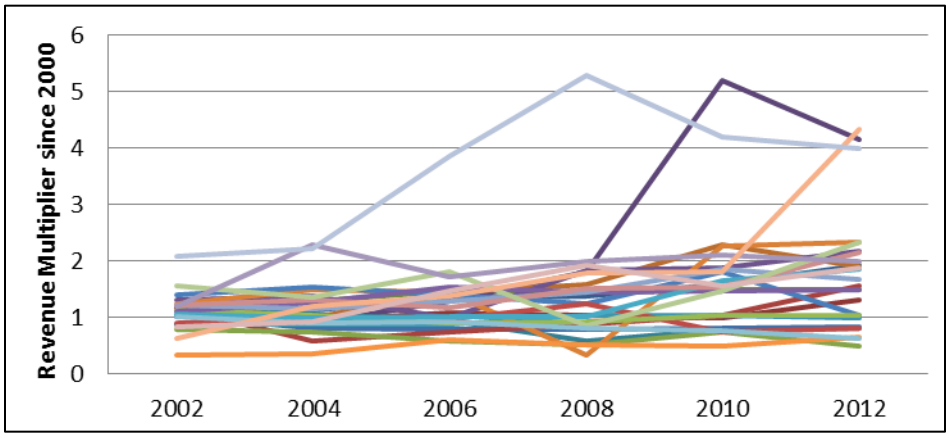
To reduce the overweighting of the budgets of very large organizations in this sample, I then graphed each organization's relative revenue as compared to the baseline of the organization's revenue in 2000. By dividing each organization's revenue by its own revenue from the year 2000, I was able to control for organizational size and obtain a more balanced picture of financial performance in this sample. As a result, every organization's value for the year 2000 would have been one, by definition, so the graph begins with data from the year 2002.

Figure 11: Relative Revenue Adjusted for Inflation, 29 Consistent Filers, 2002-2012



The organizations spiking up at the end of Figure 11 are relatively small – San Antonio Youth, incorporated in 1986, grows steadily from under $400,000 in annual revenue in 2000 to annual revenue of over $5 million during the period in question. The Human Rights Initiative of North Texas, a public charity since 2000, has the most uneven performance of the sample, showing very high revenue rates in four-year cycles with low revenue in alternate periods. Like San Antonio Youth, a drop-out prevention program, the Human Rights Initiative of North Texas shows total revenue growth of more than twelve hundred percent between 2000 and 2012. Figure 12 shows the remaining 27 organizations by inflation-adjusted relative revenue after these two organizations have been deleted.

Figure 12: Relative Revenue of 27 Consistent Filers after Deletion of Two Outliers, 2002-2012



After removing these two obvious outliers from the graph, the next two unusual graph lines correlate with Big Brothers Big Sisters, a midsized organization with impressive steady revenue growth over the time in question until 2008, at which point their revenue multiplier falls off. Still, over this twelve-year period the organization grew its annual revenue by a factor of four after adjusting for inflation, an impressive result without a recession. Avenida Guadalupe Association, a neighborhood revitalization project in downtown San Antonio incorporated in 1986, showed a great increase in revenue between 2008 and 2010. A casual web search does not reveal any major changes in the organization during this time. Family Service Association, a provider of family support services since 1950 in San Antonio, also saw a dramatic increase in relative revenue in 2010. After removing these outlier organizations from the chart, the remaining organizations present this picture of shifts in relative revenue. The final outlier with a relative revenue multiplier of over three is Business and Community Lenders of Texas, an economic development organization that assists with housing challenges, showing a large spike between 2010 and 2012 in relative revenue. Removal of these outliers leaves the resulting graph of relative revenue trends.

Figure 13: Relative Revenue, Inflation Adjusted, 23 of 29 Consistent Filers, 2002-2012

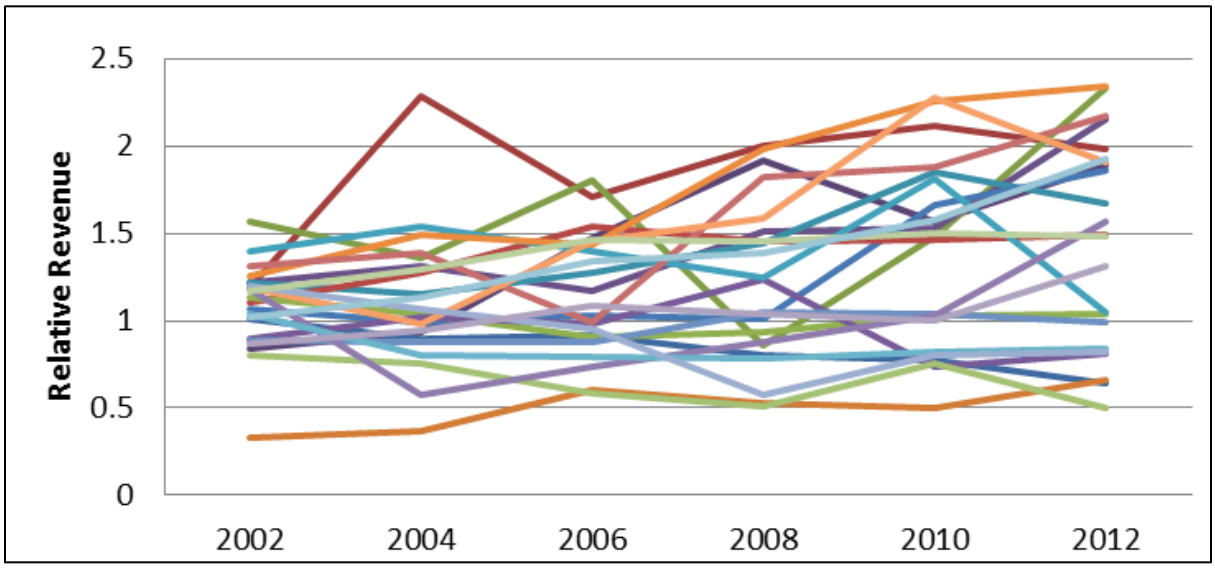
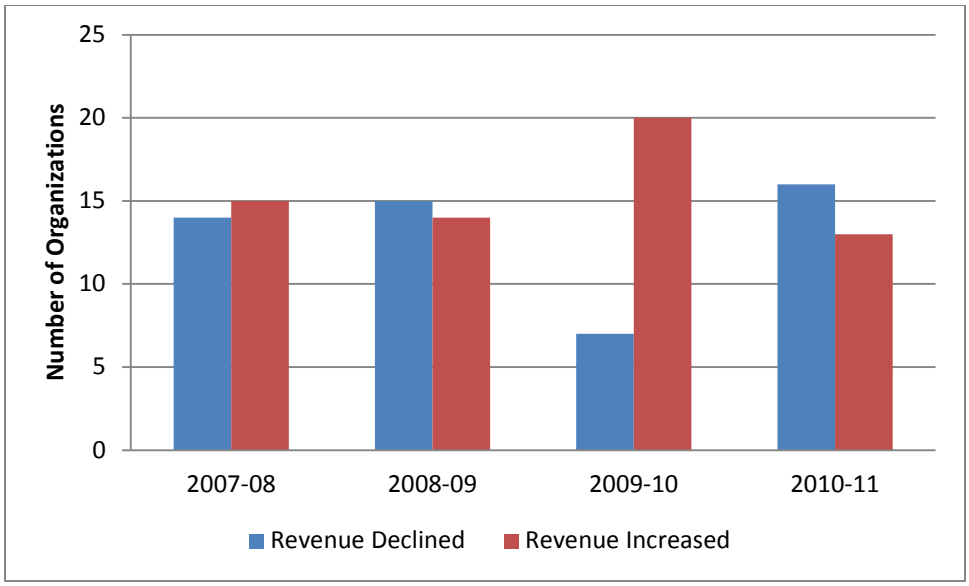


Figure 13 shows no clear trend in relative revenue among these 23 organizations. To increase the clarity of this picture, I then considered changes in revenue between 2007 and 2008, then 2008 to 2009, then 2009 to 2010, then 2010 to 2011.

Figure 14: Organizational Annual Revenue Changes for 29 Consistent Filers, 2007-2011

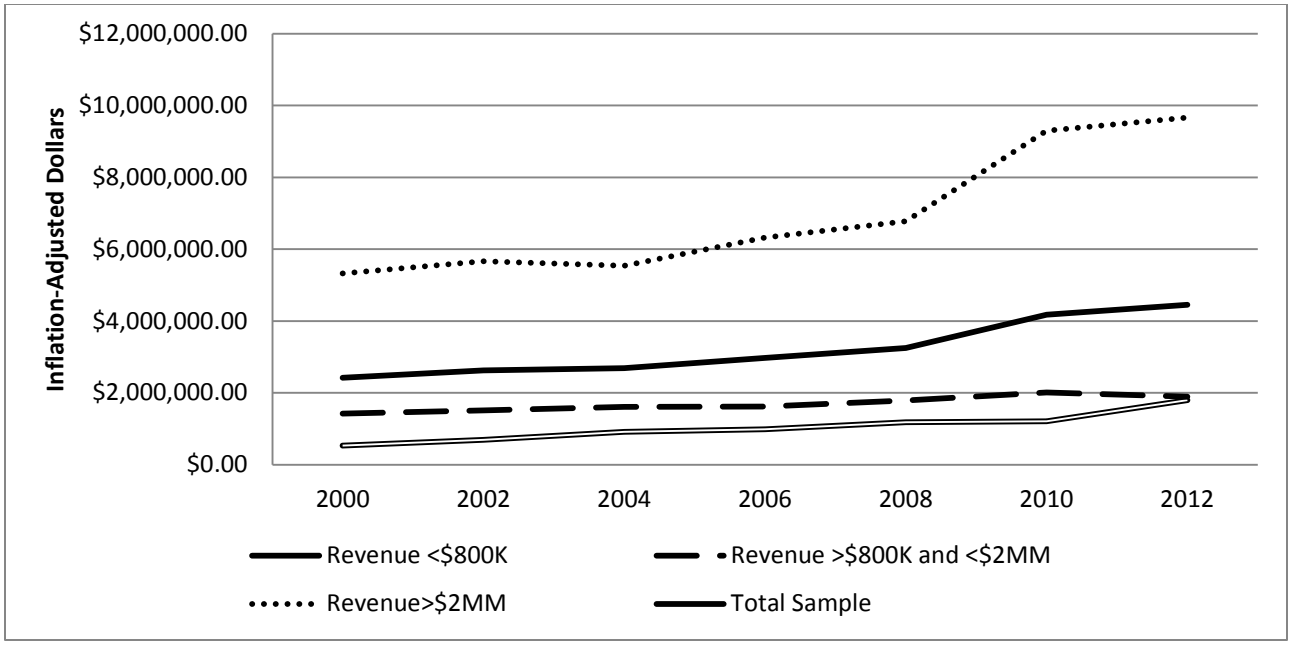


As Figure 14 shows, fourteen organizations, or roughly half the sample, showed a decline in revenue from 2007 to 2008. Fifteen organizations saw a decline from 2008 to 2009. Between 2009 and 2010, twenty organizations saw growth in revenue, then from 2010 to 2011 thirteen organizations saw revenue growth. While this graph does not address the sizes of any of these changes in revenue, it suggests that more organizations grew from 2009 to 2010 than during the other years depicted. Given that by this categorization, an increase of a single dollar qualifies an organization for the 'revenue increased' category, this chart does not describe the scope of these organizational changes. These increases from 2009 to 2010 ranged from one-eighth of one percent of the organization's

annual budget to a sixty percent increase, while the declines in revenue ranged between three and eighty percent reductions.

After considering relative revenue of the group as a whole, both with and without outliers, I then examined the group with the revenue segmentation through the lens of the relative revenue metric to determine whether organizations of different budget sizes came through the 2007-2009 timeframe differently. To do so, I divided the sample into three groups based on their annual revenue in the year 2000. The mean revenue of each group in each year in the sample can be seen in the graph below.

Figure 15: Annual Revenue, 29 Consistent Filers Divided by Revenue Scope, Adjusted For Inflation, 2000-2012

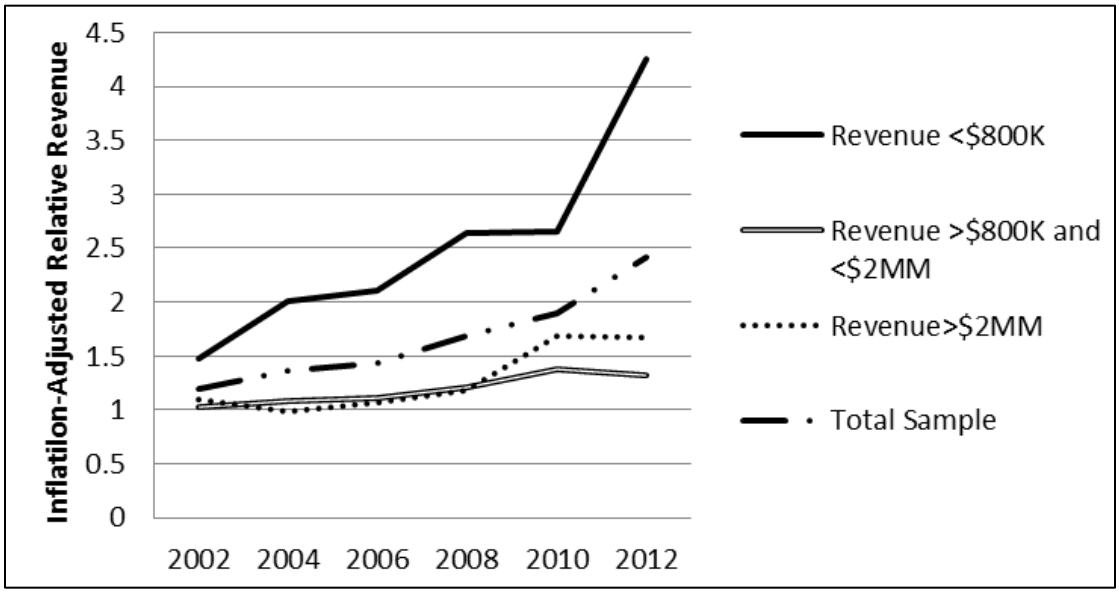


As Figure 15 shows, larger organizations grew far more than their smaller counterparts during the 2008 to 2010 time period. The smallest organizations remained relatively consistent until 2010, at which point their revenue increased. By contrast, medium-sized organizations saw their revenue dip

between 2010 and 2012. Large organizations experienced an increase in revenue between 2008 and 2010, and a smaller increase in revenue between 2010 and 2012.

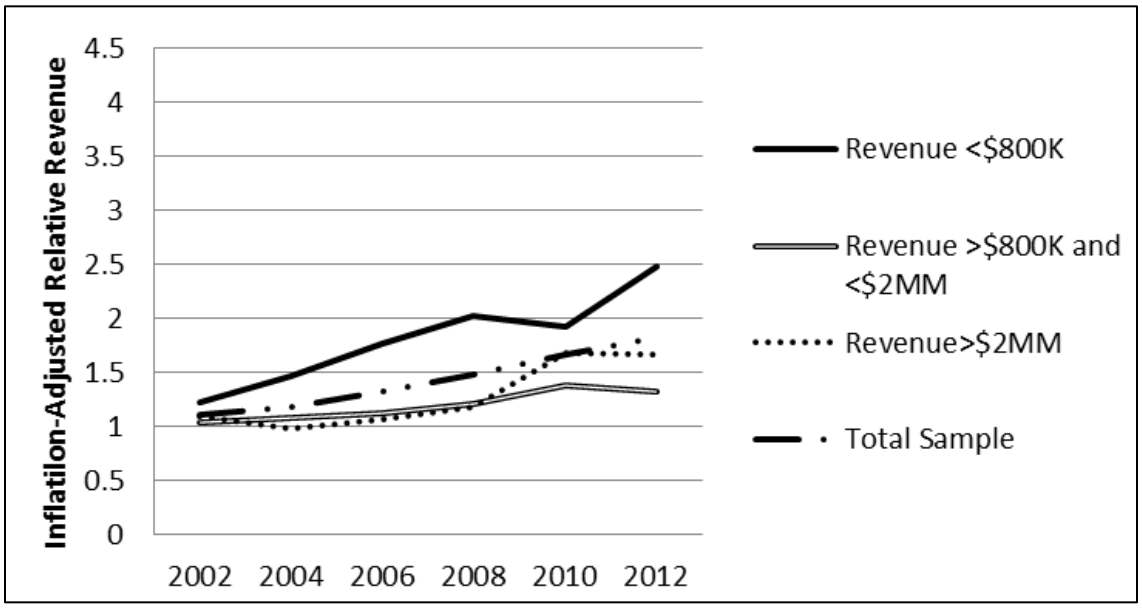
Given the differences in scope of these organizations, I was curious about whether the relative revenue of these organizations over the time period in question would show different patterns for organizations of different sizes.

Figure 16: Relative Revenue of 29 Consistent Filers Divided By Revenue Scope Adjusted For Inflation, 2002-2012



The smallest category of organizations showed an abrupt increase in relative revenue after 2010. Three of the outliers discussed above – Avenida Guadalupe Association, Human Rights Initiative of North Texas, and San Antonio Youth – fall into this category. Without these three outliers, the trajectory of the smallest organizations is still upward, though the increase from 2010 to 2012 is not as large.

Figure 17: Relative Revenue of 26 Consistent Filers Post-Outlier Removal Adjusted For Inflation, 2002-2012



This graph shows that the smallest organizations struggled most between 2008 and 2010 in terms of relative revenue growth, though their growth through the early part of the millennium as a cohort was far stronger on a percentage growth basis than that of their larger counterparts.

The fact that these organizations show no meaningful drop in revenue during the 2008 period raised more questions. Further examination showed that 21 of the 29 organizations in this sample demonstrated growth in inflation-adjusted revenue between 2006 and 2008. Of the 29, seven demonstrated growth in revenue in each of the time periods assessed. For this analysis, an increase of a single dollar in revenue was still considered revenue growth, and similarly a reduction of a single dollar in revenue would be considered a decline in revenue.

Figure 18: Inflation-Adjusted Revenue Increases, 2006-2012, 29 Consistent Filers

	Small	Medium	Large	Total
2006-08	7 (70%)	4 (44%)	5 (50%)	16 (55%)
2008-10	6 (60%)	6 (66%)	9 (90%)	21 (72%)
2010-12	7 (70%)	6 (66%)	6 (60%)	19 (66%)
Increased in all, 2006-2012	3 (30%)	1 (11%)	3 (30%)	

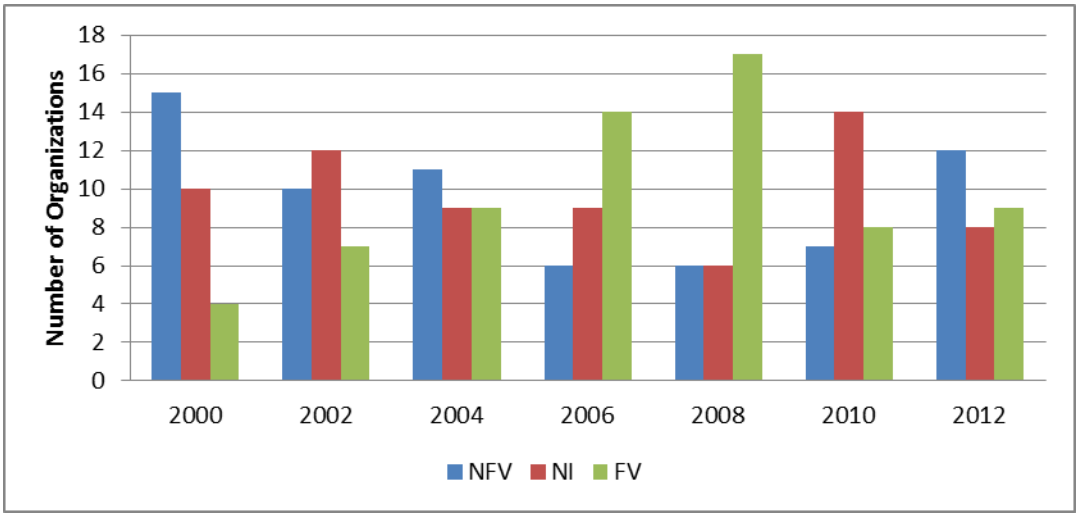
Figure 18 suggests that most of these organizations were successful in replacing any revenue that was lost during the downturn. Given that tax planning is a component of decision-making for philanthropic giving and more than a quarter of all donations to human services organizations are made in December (S. McLaughlin, 2014), the expectation would be that any issues from the recession would have affected donations to the sector by the time the 2008 990 was filed. The fact that more than half (55%) of these organizations saw their inflation-adjusted revenue increase from 2006 to 2008 suggests that these organizations as a group were able to weather this storm. Of the three groups, the small organizations saw the largest percentage of organizations with revenue growth (70%), while 60% of the medium-sized organizations saw an increase in revenue from 2006 to 2008. Large organizations were most likely to see revenue growth from 2008 to 2010 with 90% reporting revenue increases, while 60% of medium-sized organizations saw revenue increases and 66% of small organizations experienced revenue growth. From 2010 to 2012, all three groups saw about the same chances of revenue growth, with small, medium, and large organizations documenting revenue increases in 70%, 66%, and 60% of their 990 filings, respectively. Large and small organizations were more likely to see consistent growth from 2006 through 2012 with 30% of each sample showing growth in each period, while medium-sized organizations were the least likely

to show consistent revenue growth in each time period, with only one organization in this category showing such results.

With a sense of the information that traditional financial metrics can bring to the analysis of performance over the time period under examination, the question can now be asked: is the FVI bringing new information that is not captured by a simple revenue growth chart?

To answer this question, I first looked at the FVI values within this sample during the time frame under examination. A bar graph of FVI scores revealed the following:

Figure 19: FVI of 29 Consistent Filers 2000-2012

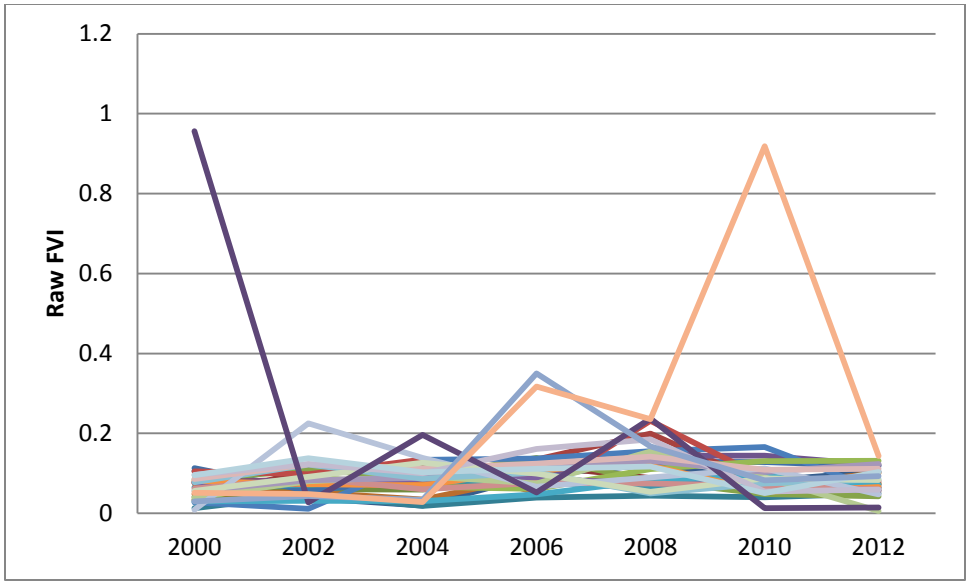


The leftmost columns in each grouping are the organizations that are considered 'not financially vulnerable' (NFV), while the rightmost columns represent organizations which are considered 'financially vulnerable' (FV). The number of organizations with an indication of not being financial vulnerability decreases from 2000 to 2006, then recovers somewhat after 2008. By contrast, the number of organizations considered financially vulnerable climbs from 2000 to its peak in 2008, then decreases somewhat thereafter. During the recovery in 2010, the number of organizations in the center 'no indication' (NI) group reaches its largest value.

In contrast to the chaos of shifts in relative revenue depicted in Figure 13, and to the simplistic picture of revenue increases presented in the bar graph of Figure 14, Figure 19 shows a shift in organizations away from financial stability into a period of vulnerability, then the beginning of a return to stability. This suggests that the FVI is providing a different perspective on financial stability that the simpler metrics of relative revenue and total revenue cannot convey.

After considering the coded FVI scores, the reader may wonder about patterns in the raw FVI scores for this sample over the full time period.

Figure 20: Raw FVI Scores of 29 Consistent Filers, 2000-2012



A few outliers prevent any trends in the data from becoming visible. Avenida Guadalupe Association had an unusual revenue situation in 2000 that caused the revenue stream diversification term of the FVI to be greater than the expected peak value of 1. The organization's income from a single stream was far greater than the reported income for the year because of losses in other

revenue streams. Thanks to the way negative values are addressed in Herfindahl-Hirshman indices, this revenue diversification value became larger than expected.

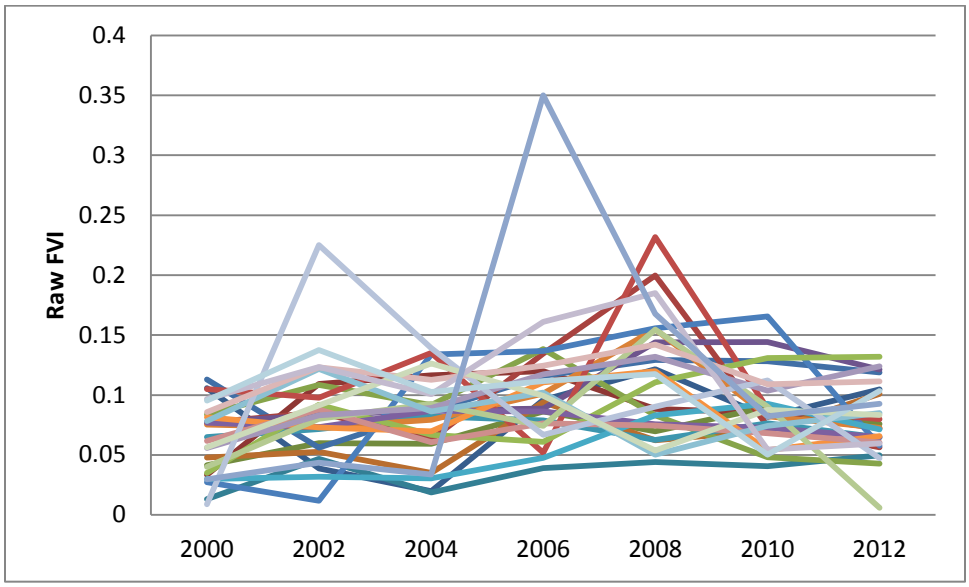
The Herfindahl-Hirshman Index (HHI) is meant to give its reviewer a sense of the degree to which an individual or an organization is reliant on a certain funding stream. A well-diversified set of funding streams will lead to a low HHI (close to zero), while an organization relying on a single funding stream will have an HHI of one. The FVI includes a measure of funding stream diversification based upon the HHI as one of its terms. However, negative values in a portfolio of funding streams are considered to be equal to zero, as it is not reasonable to consider a loss as a positive funding stream for a person or an organization (Shaffer & Robles, 2014). As a result, Avenida Guadalupe Association received an FVI score far into the 'financially vulnerable' category in 2000, the extreme outlier on the left side of Figure 20 above.

The Human Rights Institute of North Texas reveals its uneven revenue in this graph as well. In 2010, this organization had expenses that were well more than twice its revenue (235%). This threw the margin term of the FVI calculation well outside the range of most of the FVIs calculated, creating the spike in 2010 seen in the graph above (Figure 20).

Interestingly, while an FVI over 0.1 is considered to be an indication of financial vulnerability, both of the organizations with extreme outliers in the graph above returned to much more typical FVI values in the following year (though one of the two organizations was still within the financially vulnerable range of the FVI).

When this chart is considered without these two outliers, no clear pattern emerges.

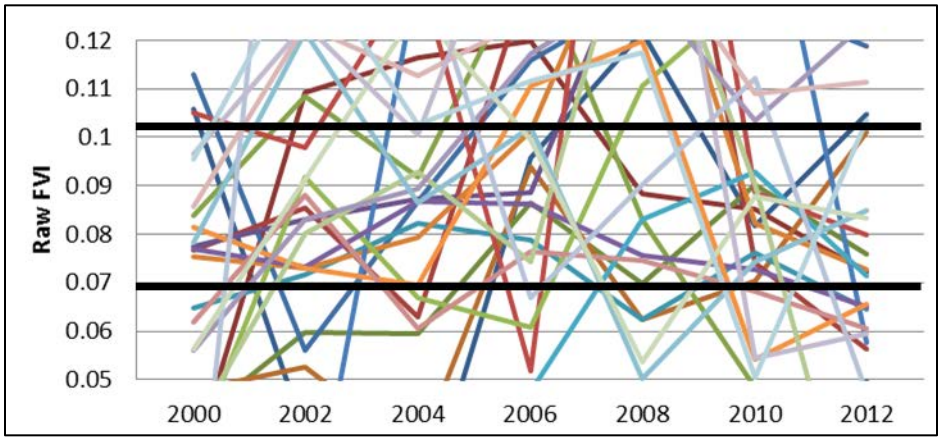
Figure 21: Raw FVI Scores, 27 of 29 Consistent Filers, 2000-2012



In 2006, San Antonio Youth stands out for a spike in FVI. Recall that FVIs over 0.1 are considered to be an indication of financial vulnerability, so the upward spikes on Figure 21 are movements away from financial stability. This is the same organization with an almost-exponential increase in relative revenue from $400,000 in 2000 to more than $5 million in 2012 that appeared as an outlier in Figure 11 of relative revenue, presented earlier in this chapter. With the impressive and consistent revenue increases shown above, it is surprising to see this organization show up as a negative outlier. Returning to the raw data shows that this organization has no reported administrative expenses in 2006. This may have been an oversight in completing the 990, as the organization does report administrative expense in the other years on record during the time span under consideration. Given that the calculation of the FVI gives positive scoring to organizations carrying higher administrative costs as a percentage of total expense based on an assumption that this burden can easily be cut without damaging programs (Tuckman & Chang, 1991), San Antonio Youth receives an FVI score that is an outlier in the 'financially vulnerable' range of the scale for 2006. This serves as a cautionary note for tax form filers: the possible omission of one number in the middle of a fairly lengthy form

caused an organization that appeared very financially strong by traditional metrics to show up as a negative outlier in another measure of financial stability. After removing San Antonio Youth from this graph, the scale on the vertical axis has been expanded to show more granularity over the span from 0.07 to 0.1, the cutoffs of interest that delineate no indication of financial vulnerability (under 0.7) from an indication of financial vulnerability (over 0.1).

Figure 22: FVI, 26 of 29 Consistent Filers, 2000-2012, Expanded to Show FVI Cutoffs



As Figure 22 shows, there is a lot of movement into and out of these categories over the entire time period, with little meaningful change during the 2007-2009 timeframe. It is important to recall that the FVI was intended by Greenlee and Trussel to be considered as a coded value based on an organization's position which can be below the .07 cutoff in the 'no indication of financial vulnerability' range or its position above the .1 cutoff, in the range which indicates financial vulnerability. This graph appears tumultuous because raw values were used, and the scale of the graph has been reduced to focus attention on the area between these indicator values. The graph has been included to show that these raw values do vary, both within and between these categories. I

presented this graph in order to show the activity of these metrics which is lost in the categorized view of a bar graph.

At first glance, it appears that fewer organizations may be in the 'no indication' area during 2008, though no later statistical testing confirmed this hypothesis. These graphical representations suggest that there is information presented by the FVI that is different from that represented by the graphs of organizational revenue, either in mean values or relative values. The FVI captures the recession more clearly than other metrics, as the bar graph in Figure 14 shows a shift of dropping FVI and recovering FVI over this time frame. It is possible that the sample was too small for these shifts to attain statistical significance, but the graphs of traditional financial indicators do not capture the recession. In fact, based on the traditional indicators, these organizations appear to have continued to grow through 2008 at roughly the same rates as they did before the Great Recession. A national study conducted by the Urban Institute (Boris, de Leon, Roeger, & Nikolova, 2010) found that nonprofits in Texas fared far better than nonprofits in other states through the Recession. Texas organizations reported fewer cuts in staffing, benefits, programs, and salaries than the national average.

Findings for Research Question 1

Having reviewed these general findings, I turn now to my first research question.

Research Question 1: How did the Great Recession of 2007-2009 affect a purposive sample of nonprofit organizations in the state of Texas?

Hypothesis A: Older organizations were less affected by the financial downturn due to the reputational bias of age.

Hypothesis B: Larger organizations were less affected by the financial downturn due to the larger sizes of their budgets.

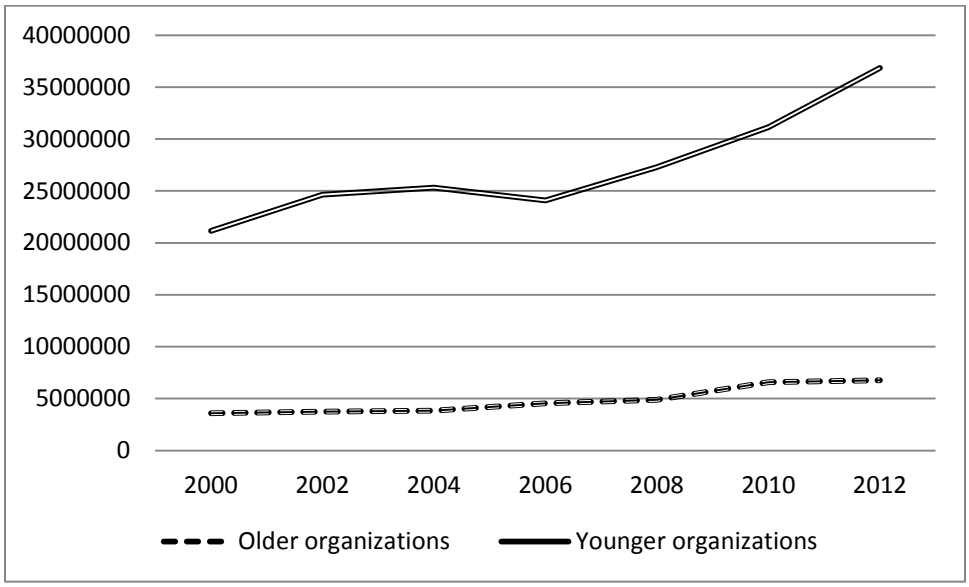
Hypothesis C: Controlling for findings from age and budget size, human services organizations showed lower FVI values than their peers in other NTEE categories, both during and after the Great Recession, mirroring national trends.

One of the major challenges in considering these hypotheses is the lack of evidence to show a financial downturn in this sample of 29 organizations. Without evidence of a crisis, it is difficult to confirm or disprove hypotheses related to crisis management.

Hypothesis A: Older organizations were less affected by the financial downturn due to the reputational bias of age.

To test this hypothesis, I split my sample of 29 organizations in half based on the year in which the organization received its public charity designation from the IRS. Organizations in the 'older' category had public charity designation dates ranging from July of 1947 to July of 1981, while the 'younger' category encompassed organizations with public charity designation dates ranging from November of 1983 to February of 2000.A perusal of the years of incorporation of the 29 organizations in this sample did not reveal any substantial gaps in age in the middle of the sample. In other words, the gaps between public charity designation dates were relatively smooth and did not suggest a clear division point in the sample. In the absence of an apparent gap and given the small size of the sample, I chose to divide the sample into two samples of roughly equal size.

Figure 23: Inflation-Adjusted Revenue Growth Vs. Organizational Age of Consistent Filers, 2000-2012



In this data set, the younger organizations had larger revenues, and appeared to show greater increases in actual dollars of revenue over the entire period under consideration. While the total dollar values may be larger for the younger half of the organizations in the data set, the shape of the lines is not meaningfully different around the time of the Great Recession. The graph above (Figure 23) appears to show younger organizations performing better during the years of the recession than in 2006, while the inflation-adjusted performance of the older organizations appears to remain quite steady throughout the time from 2000 to 2012.

Figure 24: Comparison of Means between Older and Younger Organizations, 29 Consistent Filers

		N	*Mean*	*Std. Deviation*	*S.E. Mean*
2008 FVI	Older	15	.01	.01	.00
	Younger	14	.01	.01	.00
2010 FVI	Older	15	.01	.01	.00
	Younger	14	.16	.29	.08
2012 FVI	Older	15	.09	.03	.01
	Younger	14	.08	.05	.01
2008 Revenue	Older	15	4693186.62	6633560.56	1712777.97
	Younger	14	1805762.28	1154756.49	308621.65
2010 Revenue	Older	15	6318358.27	9328408.19	2408584.64
	Younger	14	2025393.06	1360578.64	363629.94
2012 Revenue	Older	15	6512891.25	9909479.85	2558616.69
	Younger	14	2426899.13	1447911.06	386970.51
2008 Assets	Older	15	3324549.35	5629251.47	1453466.48
	Younger	14	2512300.51	1996195.36	533505.65
2010 Assets	Older	15	3790880.30	6763556.20	1746342.70
	Younger	14	2783960.26	2589882.23	692175.14
2012 Assets	Older	15	4920928.70	9499475.48	2452754.02
	Younger	14	3165159.48	3298793.07	881639.53

Figure 25: Independent Samples t-test Comparing Older and Younger Organizations, 29 Consistent Filers

		Levene's Test for Equality of Variances		*t-test for Equality of Means*					*95% Confidence Interval of the Difference*	
		F	*Sig.*	*t*	*Df*	*Sig (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
2008 FVI	E.V.A.	.02	.885	1.04	27.00	.307	.00	.00	.00	.01
	E.V.N.A			1.04	25.83	.310	.00	.00	.00	.01
2010 FVI	E.V.A.	13.66	.001	-1.96	27.00	.060	-.15	.07	-.30	.01
	E.V.N.A			-1.90	13.03	.080	-.15	.08	-.31	.02
2012 FVI	E.V.A.	2.26	.145	.31	27.00	.758	.01	.02	-.03	.04
	E.V.N.A			.31	21.52	.762	.01	.02	-.03	.04
2008 Revenue	E.V.A.	6.67	.016	1.60	27.00	.120	2887424.35	1799881.95	-805628.36	6580477.06
	E.V.N.A			1.66	14.91	.118	2887424.35	1740360.80	-824085.08	6598933.78
2010 Revenue	E.V.A.	8.48	.007	1.70	27.00	.100	4292965.21	2520731.94	-879149.51	9465079.93
	E.V.N.A			1.76	14.64	.099	4292965.21	2435879.04	-910216.44	9496146.86
2012 Revenue	E.V.A.	7.67	.010	1.53	27.00	.139	4085992.13	2677842.43	-1408486.70	9580470.95
	E.V.N.A			1.58	14.64	.136	4085992.13	2587714.35	-1441441.97	9613426.22
2008 Assets	E.V.A.	2.38	.135	.51	27.00	.614	812248.84	1591854.69	-2453967.20	4078464.88
	E.V.N.A			.52	17.68	.606	812248.84	1548287.15	-2444794.02	4069291.70
2010 Assets	E.V.A.	2.31	.140	.52	27.00	.606	1006920.04	1929145.02	-2951358.58	4965198.66
	E.V.N.A			.54	18.26	.598	1006920.04	1878515.17	-2935685.08	4949525.16
2012 Assets	E.V.A.	2.83	.104	.66	27.00	.518	1755769.22	2680518.96	-3744201.39	7255739.83
	E.V.N.A			.67	17.54	.509	1755769.22	2606394.17	-3730462.45	7242000.89

(**Note**: In the figure above and for subsequent t-test output figures, E.V.A. is an abbreviation for 'equal variances assumed' and E.V.N.A. is an abbreviation for 'Equal Variances Not Assumed.')

However, when a t-test was run comparing financial performance as well as FVI between these two groups, no statistically significant differences in means were found between the two groups. In some cases, such as that of the FVI in 2010, and revenue in all three years, these groups were shown to be different in variance, but the significance of their difference in means was below the $p<.05$ threshold. Revenue levels differed between the older half and the younger half of the sample throughout the time period under examination as shown graphically, but not sufficiently to meet the test of statistical significance at $p<.05$ in an independent samples t-test against any of the financial metrics, nor against any components of the FVI.

Hypothesis B: Larger organizations were less affected by the financial downturn due to the larger sizes of their budgets.

The organizations in the sample were split into two groups based on annual revenue in 2000 to test this hypothesis, with the cutoff between large and small organizations falling at an annual revenue of $1.4 million.

Figure 26: Comparison of Means for Larger Vs. Smaller Organizations, 29 Consistent Filers

	Size	*N*	*Mean*	*Std. Deviation*	*S.E. Mean*
2008 FVI	Small	15	.01	.01	.00
	Large	14	.01	.01	.00
2010 FVI	Small	15	.11	.26	.07
	Large	14	.05	.14	.04
2012 FVI	Small	15	.08	.05	.01
	Large	14	.09	.04	.01

Figure 27: Independent Samples t-test of FVI for Larger Vs. Smaller Organizations, 29 Consistent Filers

		Levene's Test for Equality of Variances		*t-test for Equality of Means*					*95% Confidence Interval of the Difference*	
		F	*Sig.*	*t*	*Df*	*Sig (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
2008 FVI	E.V.A.	.08	.775	-.88	27.00	.384	.00	.00	-.01	.00
	E.V.N.A.			-.88	26.09	.386	.00	.00	-.01	.00
2010 FVI	E.V.A.	1.52	.228	.64	27.00	.525	.05	.08	-.11	.21
	E.V.N.A.			.66	22.13	.518	.05	.08	-.11	.21
2012 FVI	E.V.A.	.64	.432	-.75	27.00	.459	-.01	.02	-.04	.02
	E.V.N.A.			-.76	26.81	.457	-.01	.02	-.04	.02

FVI scores showed no basis to consider these groups to have different means in an independent samples t-test. Financial indicators such as revenue and assets were omitted from this test, as it was on the basis of these indicators that these two groups were separated. Based upon statistical significance, this hypothesis cannot be confirmed.

Hypothesis C: Controlling for findings from age and budget size, human services organizations showed lower FVI values than their peers in other NTEE categories, both during and after the Great Recession, mirroring national trends.

To test this hypothesis, organizations with human service NTEE categorizations were grouped together, while organizations with NTEE categorizations outside the human service category were grouped together. An independent samples t-test compared the FVI values between these two groups.

Figure 28: Statistics Comparing Human Services Organizations to Organizations Under Other NTEE Categories, 29 Consistent Filers

	NTEE Category	*N*	*Mean*	*Std. Deviation*	*S.E. Mean*
2008 Assets	Hum. Svcs	7	2765515.76	2143660.82	810227.63
	Other	22	2985538.05	4742862.71	1011181.73
2010 Assets	Hum. Svcs	7	2787420.67	2287561.36	864616.92
	Other	22	3469395.61	5778085.04	1231891.87
2012 Assets	Hum. Svcs	7	3250345.29	3071788.51	1161026.92
	Other	22	4335170.28	8060147.02	1718429.12
2008 Revenue	Hum. Svcs	22	3928704.60	5585904.51	1190918.84
	Other	7	1320995.73	633207.53	239329.95
2010 Revenue	Hum. Svcs	22	5185282.19	7842165.94	1671955.40
	Other	7	1293524.09	803035.69	303518.96
2012 Revenue	Hum. Svcs	22	5339402.97	8331440.47	1776269.08
	Other	7	2029013.04	1084344.65	409843.75

Figure 29: Independent Samples t-test between Human Services Organizations and Other NTEE Categories, 29 Consistent Filers, p<.05

		Levene's Test for Equality of Variances		*t-test for Equality of Means*					*95% Confidence Interval of the Difference*	
		F	*Sig.*	*t*	*Df*	*Sig (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
2008 Assets	E.V.A.	.47	.500	-.12	27.00	.907	-220022.28	1867346.80	-4051501.43	3611456.86
	E.V.N.A			-.17	23.18	.867	-220022.28	1295745.85	-2899326.80	2459282.23
2010 Assets	E.V.A.	.85	.366	-.30	27.00	.765	-681974.94	2260285.53	-5319697.77	3955747.89
	E.V.N.A			-.45	25.30	.654	-681974.94	1505031.56	-3779790.63	2415840.75
2012 Assets	E.V.A.	.96	.336	-.34	27.00	.733	-1084825.00	3148028.22	-7544045.37	5374395.37
	E.V.N.A			-.52	25.76	.605	-1084825.00	2073880.94	-5349677.34	3180027.35
2008 Revenue	E.V.A.	2.78	.107	1.22	27.00	.234	2607708.87	2141685.49	-1786666.78	7002084.52
	E.V.N.A			2.15	22.60	.043	2607708.87	1214728.99	92396.24	5123021.50
2010 Revenue	E.V.A.	3.25	.082	1.29	27.00	.206	3891758.11	3005744.17	-2275519.52	10059035.73
	E.V.N.A			2.29	22.32	.032	3891758.11	1699281.79	370609.10	7412907.11
2012 Revenue	E.V.A.	2.62	.117	1.04	27.00	.310	3310389.93	3196207.10	-3247685.33	9868465.19
	E.V.N.A			1.82	23.07	.082	3310389.93	1822938.22	-460041.94	7080821.80

Again the data did not show a statistically significant trend to support this hypothesis. The fact that the sample size was so small may have affected this result. Still, for the purposes of this study, hypothesis C was not supported: no statistically significant difference was identified between the performance of human services organizations and their counterparts in other mission categories.

The lack of evidence of a financial downturn within the sample makes testing all of the hypotheses under the first research question challenging. Within the state of Texas, the greater Austin area has been thriving. With a population growth rate roughly four times the growth rate of the United States and almost twice that of the state of Texas overall (Greater Austin Chamber of Commerce, 2015), the Austin metro-service area was thriving during the period under examination from 2000 to 2012. With rates of bachelor's and advanced degree attainment that are roughly half again the state average and large employers in fields with low exposure to recessions such as education, health care, and government (Greater Austin Chamber of Commerce, 2015), it seems that these organizations may have been in the right place at the right time to weather the Great Recession with fewer financial consequences than their peers in other states, or even in other parts of the state of Texas. According to the State Budget Crisis Task Force's Texas Report, oil and gas revenue cushioned the recession's impact on the state, and also delayed its impact (Ravitch & Volcker, 2012). This report states that Texas entered the Great Recession in September 2008 and emerged roughly one year later. While the state surpassed its pre-recession employment rate in December 2011, the national economy has only recovered about half of the jobs that were lost in the recession by July of 2012 (Ravitch & Volcker, 2012).

This lack of statistically significant impact makes answering all of the research questions difficult. Addressing hypotheses that organizational age, size, or mission category might affect performance during the Great Recession is difficult with no clear evidence that these organizations were affected financially in a statistically significant way by the recession. Still, no statistically significant differences were found in the consistent sample of 29 organizations to support any of these hypotheses. However, considering the information portrayed in Figure 15 where the sample was trisected, small

organizations demonstrated larger relative revenue growth over the period prior to 2008, then were the only group to show a decline in revenue between 2008 and 2010, while the largest category of organizations showed an increase in annual revenue between 2008 and 2010.

Hypothesis C concerned performance of organizations with missions in the health and human services space in contrast to the remainder of the sample. Of the organizations in the final sample of 80, 42 were human services organizations. Of the 29 organizations with a full 990 on file for each of the years in question, 22 are human services organizations, four are public benefit organizations, and three have education-oriented missions. No statistically significant difference was found in the performance of these samples.

Findings For Research Question 2

Since this first data set of 29 organizations had been considered so extensively, I began my examinations of my second research question with this set of 29 organizations.

Research Question 2: Did CEI scores in 2010 show any relationship with FVI scores in 2008, 2010, or 2012?

To begin with, I looked for correlations between total FVI scores, and the CEI subscales and total scores in this sample.

Figure 30: Correlation of Cumulative FVI Scores and CEI Scores, 29 Consistent Filers

	N=29 for all cells	2008 FVI	2010 FVI	2012 FVI
Leadership Culture	Pearson Correlation	-0.099	-0.193	-0.082
	Sig. (2-tailed)	0.608	0.315	0.671
Community Collaboration	Pearson Correlation	-0.138	-0.206	-0.007
	Sig. (2-tailed)	0.476	0.284	0.971
Marketing and Communication	Pearson Correlation	-0.149	-0.134	-0.037
	Sig. (2-tailed)	0.44	0.490	0.851
Infrastructure	Pearson Correlation	-0.111	-0.225	0.109
	Sig. (2-tailed)	0.567	0.241	0.575
Volunteer Management	Pearson Correlation	-0.104	-0.05	0.036
	Sig. (2-tailed)	0.591	0.798	0.852
Total CEI	Pearson Correlation	-0.147	-0.178	0.024
	Sig. (2-tailed)	0.446	0.357	0.900

Finding no statistically significant correlations between the cumulative FVI and the CEI or its subscales, I ran the individual FVI terms against the subscales and the cumulative CEI.

Figure 31: Correlations Between CEI and its Subscales and the Disaggregated Terms of the FVI, 29 Consistent Filers

	N=29 for all rows	Leadership Culture	Community Collaboration	Marketing and Communication	Infrastructure	Volunteer Management	Total CEI
2008 Equity	Pearson Correlation	-.192	-.119	-.117	-.196	-.148	-.166
	Sig. (2-tailed)	.318	.539	.545	.308	.443	.390
2008 Concentration	Pearson Correlation	.199	.351	.203	.162	.077	.232
	Sig. (2-tailed)	.301	.062	.290	.401	.691	.226
2008 Admin	Pearson Correlation	.331	108	.341	.154	.196	.242
	Sig. (2-tailed)	.079	.576	.070	.424	.308	.207
2008 Margin	Pearson Correlation	-.328	-.164	-.185	-.154	-.083	-.173
	Sig. (2-tailed)	.083	.396	.336	.424	.670	.369
2008 Administration	Pearson Correlation	.331	.108	.341	.154	.196	.242
	Sig. (2-tailed)	.079	.576	.070	.424	.308	.207
2010 Concentration	Pearson Correlation	.318	.393*	.274	.148	.221	.302
	Sig. (2-tailed)	.093	.035	.151	.444	.248	.112
2010 Margin	Pearson Correlation	-.382*	-.158	-.200	-.270	-.137	-.223
	Sig. (2-tailed)	.041	.414	.298	.156	.477	.246
2010 Administration	Pearson Correlation	-.079	-.195	.202	-.249	-.293	-.268
	Sig. (2-tailed)	.683	.310	.294	.192	.123	.159
2012 Equity	Pearson Correlation	-.137	-.132	-.116	-.193	-.197	-.181
	Sig. (2-tailed)	.477	.494	.550	.315	.305	.347
2012 Concentration	Pearson Correlation	.337	.422*	.286	.235	.256	.347
	Sig. (2-tailed)	.074	.023	.132	.219	.181	.065
2012 Margin	Pearson Correlation	.118	-.015	.120	.018	-.011	.040
	Sig. (2-tailed)	.543	.940	.535	.926	.954	.838
2012 Administration	Pearson Correlation	-.215	-.223	-.216	-.312	-.339	-.310
	Sig. (2-tailed)	.263	.244	.261	.100	.072	.101

Two relationships in this correlation were statistically significant: one in a single time period, and one in two consecutive time periods.

Figure 32: Correlation of Disaggregated FVI Terms and Disaggregated CEI Subscales, N=29 Consistent Filers, p<.05

Variable 1	Variable 2	Pearson Correlation	Significance (2-tailed)
2010 FVI: Margin	CEI: Leadership Culture	-.382*	.041
2008 FVI: Concentration	CEI: Community Collaboration	.351	.062
2010 FVI: Concentration	CEI: Community Collaboration	.393*	.035
2012 FVI: Concentration	CEI: Community Collaboration	.422*	.023

The first relationship was between the Margin term of the FVI and Leadership Culture subscale. The Leadership Culture subscale considers organizational traits that start from the leadership team and permeate an organization's culture. The Margin term of the FVI considers the amount of additional revenue an organization brings in on top of each dollar of expense. All CEI subscales are scored positively, with higher scores being stronger indications of a leadership culture that supports volunteers. The FVI Margin term is scored positively, but the overall FVI is scored negatively. In other words, a higher score on the Margin term is a suggestion of increased financial vulnerability. Therefore, this suggests that organizations with higher scores on the Leadership Culture subscale of the CEI garnered lower amount of net income from their revenue in 2010. In other words, their revenue was closer to their expenses than for those organizations with lower scores on the CEI's Leadership Culture subscale.

The second relationship was between the Community Collaboration term on the CEI and the Concentration term of the FVI. This relationship was statistically significant in both 2010 and 2012,

and showed a weak to moderate correlation lacking statistical significance in 2008. This was the only statistically significant relationship between CEI and FVI subcomponents that achieved statistical significance in consecutive time periods. This relationship suggests that organizations with higher levels of community collaboration as reported on the CEI are more likely to rely on a more concentrated set of revenue streams. This can mean a smaller number of funding sources overall, or a less balanced revenue flow from a set of streams. In other words, if one organization brings in 90% of its revenue from one stream and has four streams making up the other 10%, this organization will have a more concentrated revenue stream than an organization that has 20% of its income flowing from each of five revenue streams.

After conducting this analysis, I looked at the full data set to determine which organizations could be added to the analysis. Because I planned to examine organizational performance before the CEI administration (2008), in the same time period as the CEI administration (2010), and in the time period immediately following administration of the CEI (2012), only organizations with filings of Form 990 in each of these three years were considered. I then reviewed the 21 new organizations with consistent filings in these years and compared their performance to the 29 organizations with consistent filings across all seven time periods through an independent samples t-test.

Figure 33: Comparison of Means of 29 Consistent Filers (Represented with '7') and 21 Organizations to be Added (Represented with '3')

	Years of Filing	*N*	*Mean*	*Std. Deviation*	*S.E. Mean*
2008 FVI: Concentration	7	29	.74	.19	.03
	3	21	.81	.26	.06
2008 FVI: Administration	7	29	.05	.07	.01
	3	21	.12	.12	.03
2008 FVI: Margin	7	29	.00	.12	.02
	3	21	.01	.27	.06
2008 FVI: Equity	7	29	1.19	1.44	.27
	3	21	.81	1.05	.23
2008 FVI: Total	7	29	.12	.06	.01
	3	21	.13	.13	.03
2010 FVI: Concentration	7	29	.77	.17	.03
	3	21	.86	.18	.04
2010 FVI: Administration	7	29	.14	.06	.01
	3	21	.22	.21	.05
2010 FVI: Margin	7	29	.01	.30	.05
	3	21	.13	.17	.04
2010 FVI: Equity	7	29	.97	.95	.18
	3	21	.97	1.54	.34
2010 FVI: Total	7	29	.11	.16	.03
	3	21	.07	.04	.01

Fig. 33, continued

2012 FVI: Concentration	7	29	.75	.19	.04
	3	21	.80	.23	.05
2012 FVI: Administration	7	29	.13	.08	.01
	3	21	.20	.19	.04
2012 FVI: Margin	7	29	.09	.21	.04
	3	21	.11	.18	.04
2012 FVI: Equity	7	29	.80	.73	.14
	3	21	1.12	1.57	.34
2012 FVI: Total	7	29	.08	.03	.01
	3	21	.08	.06	.01
Change in Revenue, 2008-2010	7	29	9.98	12.28	2.28
	3	21	17.20	20.62	4.50
Change in Revenue, 2010-2012	7	29	-.81	.12	.02
	3	21	-.72	.24	.05
Change in Assets, 2008-2010	7	29	-.95	21.73	4.04
	3	21	19.99	78.77	17.19
Change in Assets, 2010-2012	7	29	-.72	.44	.08
	3	21	-.91	.34	.07

Figure 34: Independent Samples t-test Comparing 29 Consistent Filers to 21 Organizations to be Added to Sample

		Levene's Test for Equality of Variances		*t-test for Equality of Means*					*95% Confidence Interval of the Difference*	
		F	*Sig.*	*t*	*Df*	*Sig (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*Lower*	*Upper*
2008 FVI: Concentration	E.V.A.	1.57	.216	-1.11	48.00	.271	-.07	.06	-.20	.06
	E.V.N.A			-1.06	34.90	.296	-.07	.07	-.20	.06
2008 FVI: Administration	E.V.A.	8.23	.006	-2.45	48.00	.018	-.06	.03	-.12	-.01
	E.V.N.A			-2.27	30.41	.031	-.06	.03	-.12	-.01
2008 FVI: Margin	E.V.A.	2.27	.138	-.16	48.00	.877	-.01	.06	-.12	.10
	E.V.N.A			-.14	25.41	.890	-.01	.06	-.14	.12
2008 FVI: Equity	E.V.A.	.71	.403	1.03	48.00	.310	.38	.37	-.36	1.12
	E.V.N.A			1.08	47.99	.286	.38	.35	-.33	1.09
2008 FVI: Total	E.V.A.	2.70	.107	-.27	48.00	.786	-.01	.03	-.06	.05
	E.V.N.A			-.25	25.96	.808	-.01	.03	-.07	.05
2010 FVI: Concentration	E.V.A.	.35	.556	-1.79	48.00	.081	-.09	.05	-.19	.01
	E.V.N.A			-1.77	41.84	.084	-.09	.05	-.19	.01
2010 FVI: Administration	E.V.A.	3.72	.060	-1.88	48.00	.066	-.08	.04	-.16	.01
	E.V.N.A			-1.64	22.51	.116	-.08	.05	-.18	.02
2010 FVI: Margin	E.V.A.	.00	.990	-1.63	48.00	.110	-.12	.07	-.26	.03
	E.V.N.A			-1.77	45.53	.083	-.12	.07	-.25	.02
2010 FVI: Equity	E.V.A.	.21	.646	.01	48.00	.989	.01	.35	-.70	.71
	E.V.N.A			.01	30.79	.989	.01	.38	-.77	.78

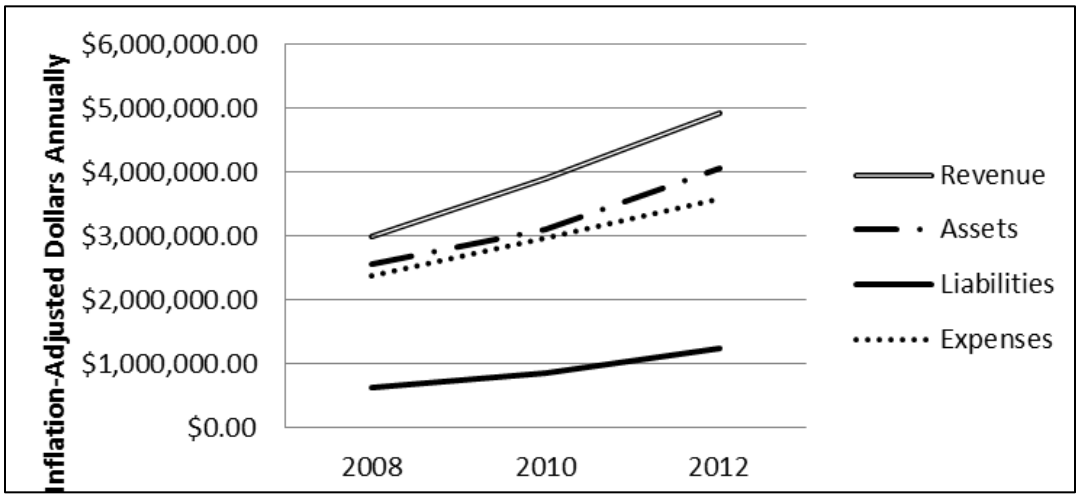
I saw only one statistically significant difference between the two samples: the level of administrative expense was meaningfully lower in the group of 29 consistent filers than in the 21 organizations to be added in 2008. This lowered the FVI Admin term for the 21 organizations to be added, which is considered to be an increase in financial vulnerability by Greenlee and Trussel (2000). While the FVI Administration term was lower for all three time periods under examination for CEI comparisons (2008, 2010, and 2012), the gap was only statistically significant at the $p<.05$ level in 2008. I decided that this one difference was not sufficient to outweigh the benefit of augmenting the sample size for another round of testing. Therefore, these 21 organizations were added to the sample.

Analyzing 50 Organizations

The mean FVI for this 50 organization sample decreases from 0.12 (financially vulnerable) to 0.10 (border between financially vulnerable and no indication) to 0.08 (low in the no indication range) over the three samples from 2008 to 2012, suggesting that these organizations as a group are reducing their financial vulnerability over this time frame. A full list of these 50 organizations can be found in Appendix B.

Next I examined how revenue, expenses, liabilities, and assets varied during this time frame for these 50 organizations.

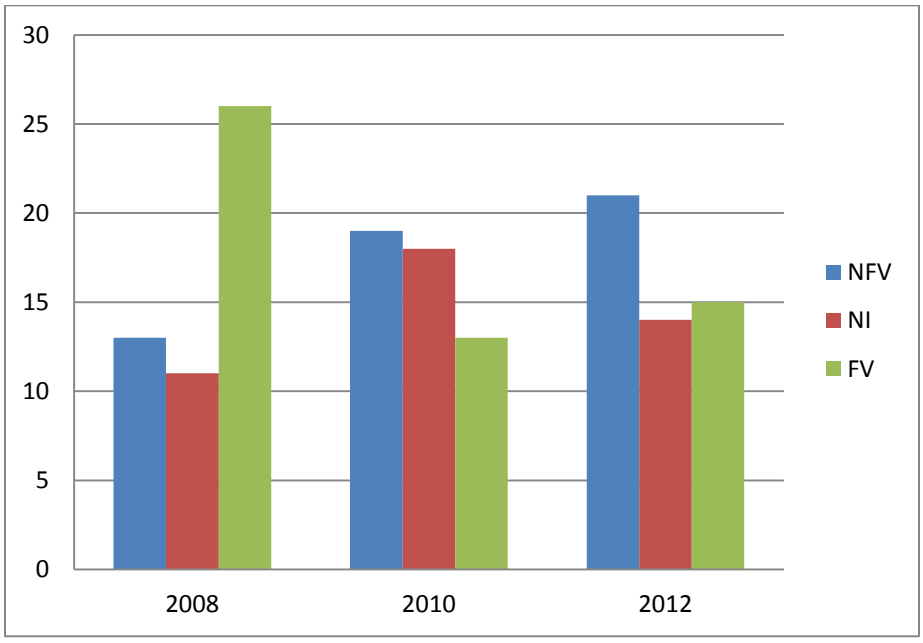
Figure 35: Financial Indicators, 2008-2012, in Inflation-Adjusted Dollars, 50 Organizations



The trend of improvement seen in the smaller sample over the later years of the time period appears consistent with the trend of improvement seen in this shorter time frame. Inflation-adjusted financial indicators appear to rise steadily through the time under examination.

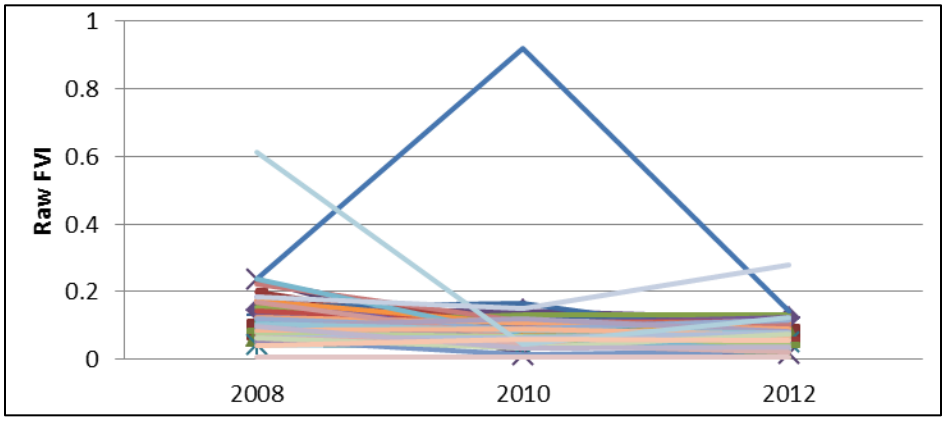
An independent samples t-test of these financial indicators for the 29 human services organizations in this sample as compared to the 21 organizations with missions outside of the human services category of the National Taxonomy of Exempt Entities (NTEE) revealed no statistically significant differences at an alpha level of .05 between human service organizations and organizations from other NTEE categories.

Figure 36: Coded FVI Scores, 50 Organizations, 2008-2012



As with the smaller sample, the FVI scores show a recovery from the financial crisis as these organizations move away from the 2008 time period. The number of organizations considered not to be financially vulnerable drops in each time period, while the number considered financially vulnerable drops by half from 2008 to 2010 before a slight rebound up to 15 in 2012. This overall trend suggests increasing financial stability in the sample over the time between 2008 and 2012.

Figure 37: Raw FVI Scores, 50 Organizations

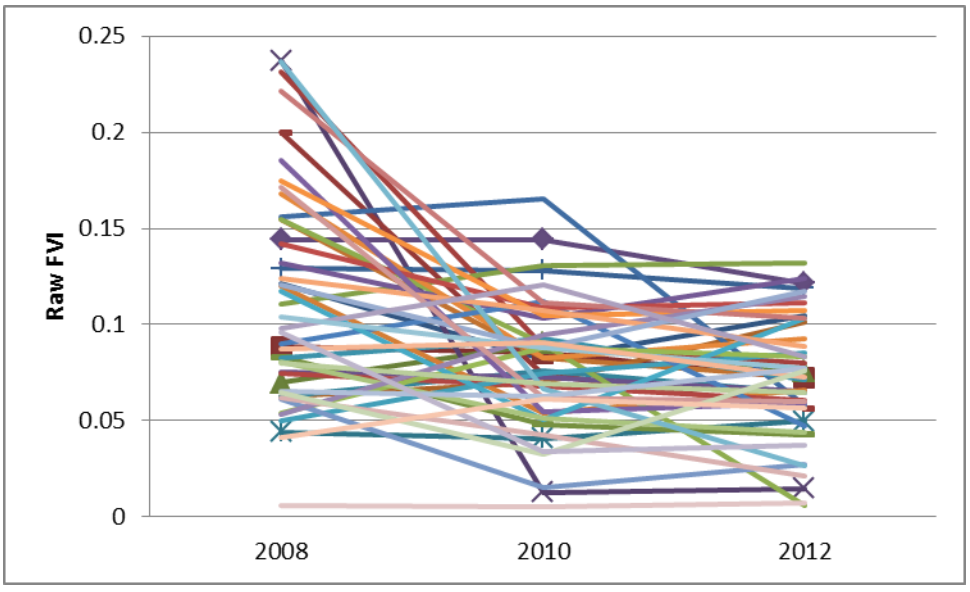


The 2010 spike in the FVI for the Human Rights Initiative of North Texas is an outlier on this graph as it was for the sample of 29 organizations above in Figure 20. The outlier spiking in 2008 is representing Reserve Aid, a Dallas-based organization supporting National Guard and Reservist veterans upon their return. Their expenses increased by a factor of ten from 2006 to 2008. For an organization that received its public charity designation in 2005, this is not shocking: as the organization became more established it grew dramatically. By 2010 Reserve Aid's revenue was greater than its expenses, and its FVI returned to the 'Not Financially Vulnerable' range.

The third outlier can be seen spiking up in 2012. This organization, Digital Workforce Academy, earns all of its revenue from services provided, and has a higher FVI due to its single revenue stream accounting for all of its revenue.

Without these outlier organizations, the raw FVI scores for this sample look like this:

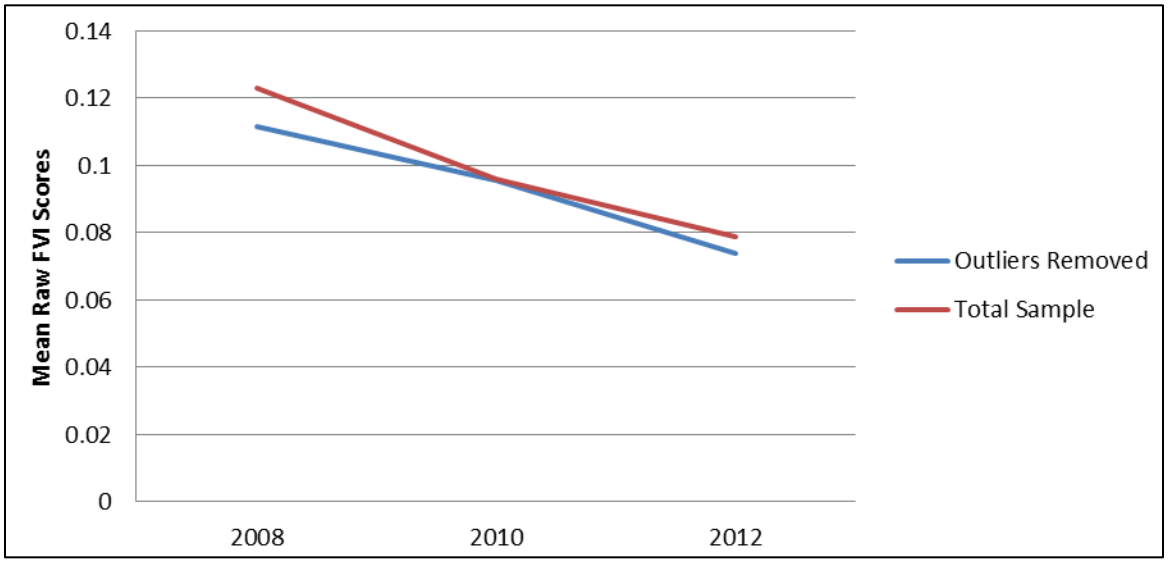
Figure 38: Raw FVI Scores for 47 of 50 Organizations, 2008-2012



The downward trend reflected in the sample's means is evident in this graph. These organizations are moving down the graph away from financial vulnerability. Re-running the mean raw FVI of this

sample after removing these three organizations reduces the means to 0.11 in 2008, 0.09 in 2010, and 0.08 in 2012.

Figure 39: Mean Raw FVI Scores for 47 Organizations Compared to 50 Organizations Before and After Outlier Removal, 2008-2012



Removing the outliers reveals the downward trend of the overall sample more clearly.

CEI and FVI from 2008-2012

With this sample of 50 organizations, we now turn to the Community Engagement Index (CEI) findings. Do responses to the CEI relate to FVI or other financial metrics in the year it was administered (2010)?

To answer this question I sought correlation between total CEI scores, as well as each subscale individually, and the financial indicators graphed above (inflation-adjusted revenue, expenses, liabilities, and assets) as well as the change in each of these indicators from 2008 to 2010, and the change from 2010 to 2012.

The same lack of statistically significant results appeared when the full FVI was correlated with the CEI. Out of curiosity, I also explored relationships between CEI scores and changes in revenue and

assets during this time period. In addition to considering these raw values, I considered the changes in these values as well as in the FVI and its individual terms between 2008 and 2010, and between 2010 and 2012. My thought was that while organizations might start at different values of these metrics, an economic shock might cause organizations with stronger community engagement practices to experience a different pattern of changes than their peers. I tested for these relationships through bivariate correlations between CEI total and subscale scores, and the variables mentioned above. Results from these correlative tests can be found in the figures below.

Figure 40: Bivariate Correlations Between CEI and its Subscales, and Changes in 2008 FVI and its Subscales, N = 50 Organizations, p<.05

		2008 FVI Concentration	2008 FVI Administration	2008 FVI Margin	2008 FVI Equity	2008 FVI
CEI: Leadership Culture	Pearson Correlation	-0.02	0.26	-0.02	-0.13	-0.01
	Sig. (2-tailed)	0.89	0.07	0.87	0.38	0.93
CEI: Community Collaboration	Pearson Correlation	0.05	0.16	0.14	-0.03	-0.22
	Sig. (2-tailed)	0.71	0.28	0.32	0.85	0.13
CEI: Marketing and Comm.	Pearson Correlation	-0.09	0.26	0.19	-0.09	-0.33
	Sig. (2-tailed)	0.53	0.07	0.20	0.52	0.02
CEI: Infrastructure	Pearson Correlation	-0.04	0.22	0.1	-0.18	-0.21
	Sig. (2-tailed)	0.80	0.12	0.48	0.22	0.15
CEI: Volunteer Management	Pearson Correlation	0.01	0.23	0.09	-0.17	-0.23
	Sig. (2-tailed)	0.95	0.11	0.54	0.24	0.10
Total CEI	Pearson Correlation	-0.03	0.25	0.16	-0.13	-0.29
	Sig. (2-tailed)	0.86	0.08	0.28	0.36	0.04

The statistically significant relationships between the total FVI in 2008 and the CEI's Marketing and Communication subscale, as well as the total CEI score, will be discussed after these statistics are presented.

Figure 41: Bivariate Correlations Between CEI and its Subscales, and Changes in 2010 FVI and its Subscales, N = 50 Organizations, p<.05

		2010 FVI Concentration	2010 FVI Administration	2010 FVI Margin	2010 FVI Equity	2010 FVI
CEI: Leadership Culture	Pearson Correlation	0.1	0.12	-0.17	0.11	0.22
	Sig. (2-tailed)	0.50	0.41	0.25	0.43	0.13
CEI: Community Collaboration	Pearson Correlation	0.07	-0.04	-0.1	0.08	0.13
	Sig. (2-tailed)	0.62	0.80	0.50	0.59	0.37
CEI: Marketing Communication	Pearson Correlation	0.02	0.1	-0.11	0.01	0.12
	Sig. (2-tailed)	0.87	0.49	0.45	0.96	0.42
CEI: Infrastructure	Pearson Correlation	-0.02	0.04	-0.14	-0.05	0.11
	Sig. (2-tailed)	0.89	0.77	0.32	0.75	0.45
CEI: Volunteer Management	Pearson Correlation	0.05	-0.06	-0.07	-0.12	0.03
	Sig. (2-tailed)	0.74	0.7	0.63	0.43	0.86
Total CEI	Pearson Correlation	0.04	0.02	-0.12	-0.02	0.11
	Sig. (2-tailed)	0.81	0.88	0.40	0.91	0.44

No statistically significant relationships were found between the FVI or its subscales and the CEI or its subscales in 2010.

Figure 42: Correlation between 2012 FVI and CEI, With Subscales

		2012 FVI Concentration	2012 FVI Administration	2012 FVI Margin	2012 FVI Equity	2012 FVI
CEI: Leadership Culture	Pearson Correlation	0.21	-0.03	0.09	0.11	0.17
	Sig. (2-tailed)	0.15	0.82	0.52	0.46	0.24
CEI: Community Collaboration	Pearson Correlation	0.2	-0.09	0.03	0.04	0.19
	Sig. (2-tailed)	0.16	0.53	0.86	0.76	0.18
CEI: Marketing Communication	Pearson Correlation	0.06	0.09	0.12	-0.06	-0.04
	Sig. (2-tailed)	0.68	0.56	0.43	0.68	0.80
CEI: Infrastructure	Pearson Correlation	0.11	-0.06	0.04	-0.22	-0.01
	Sig. (2-tailed)	0.43	0.70	0.80	0.12	0.92
CEI: Volunteer Management	Pearson Correlation	0.14	0.01	-0.06	-0.09	0.13
	Sig. (2-tailed)	0.35	0.96	0.66	0.55	0.39
Total CEI	Pearson Correlation	0.14	-0.01	0.04	-0.09	0.07
	Sig. (2-tailed)	0.32	0.94	0.78	0.53	0.63

No statistically significant correlations were found between 2012 FVI scores, either in total or by subscale, and CEI scores.

Figure 43: Correlations between Changes in Revenue and Assets Between 2008-2010 and 2010-2012, and CEI Total and Subscales

		Delta Revenue 2008-2010	Delta Revenue 2010-2012	Delta Assets 2008-2010	Delta Assets 2010-2012
CEI: Leadership Culture	Pearson Correlation	0.02	-0.11	-0.16	0.03
	Sig. (2-tailed)	0.84	0.45	0.27	0.84
CEI: Community Collaboration	Pearson Correlation	-0.04	-0.21	-0.16	0.01
	Sig. (2-tailed)	0.81	0.14	0.26	0.96
CEI: Marketing Communication	Pearson Correlation	0.01	0.03	-0.01	-0.01
	Sig. (2-tailed)	0.93	0.85	0.95	0.95
CEI: Infrastructure	Pearson Correlation	-0.06	-0.16	-0.11	-0.04
	Sig. (2-tailed)	0.66	0.28	0.43	0.78
CEI: Volunteer Management	Pearson Correlation	-0.11	-0.08	-0.09	-0.08
	Sig. (2-tailed)	0.44	0.60	0.55	0.57
Total CEI	Pearson Correlation	-0.05	-0.11	-0.1	-0.03
	Sig. (2-tailed)	0.73	0.45	0.49	0.82

No statistically significant correlations were identified between CEI subscale or total scores and changes in revenue or asset levels between 2008 and 2010, or between 2010 and 2012.

Figure 44: Correlations between Changes in FVI Terms and CEI Subscales

		Delta FVI Concentration, 2008-2010	Delta FVI Administraion 2008-2010	Delta FVI Margin 2008-2010	Delta FVI Equity 2008-2010
CEI: Leadership Culture	Pearson Correlation	0.13	-0.04	-0.14	0.32
	Sig. (2-tailed)	0.39	0.79	0.35	0.02
CEI: Community Collaboration	Pearson Correlation	0	-0.11	-0.19	0.14
	Sig. (2-tailed)	0.98	0.43	0.19	0.34
CEI: Marketing Communication	Pearson Correlation	0.14	-0.05	-0.23	0.14
	Sig. (2-tailed)	0.33	0.71	0.11	0.35
CEI: Infrastructure	Pearson Correlation	0.03	-0.08	-0.2	0.18
	Sig. (2-tailed)	0.86	0.57	0.15	0.20
CEI: Volunteer Management	Pearson Correlation	0.04	-0.17	-0.13	0.08
	Sig. (2-tailed)	0.80	0.25	0.38	0.57
Total CEI	Pearson Correlation	0.07	-0.12	-0.22	0.16
	Sig. (2-tailed)	0.64	0.4	0.12	0.28

The correlation between the CEI Leadership Culture subscale and the change in equity terms is the only test with a statistically significant result. Given how many correlations were run to generate this figure, it is not surprising that one would be statistically significant. Still, this finding may be relevant to future research on this topic.

Figure 45: Correlations between Changes in FVI Terms and CEI Subscales

		Delta FVI Concentration 2010-2012	Delta FVI Administration 2010-2012	Delta FVI Margin 2010-2012	Delta Equity 2010-2012
CEI: Leadership Culture	Pearson Correlation	0.21	-0.18	0.24	-0.02
	Sig. (2-tailed)	0.14	0.21	0.09	0.88
CEI: Community Collaboration	Pearson Correlation	0.24	-0.06	0.12	-0.06
	Sig. (2-tailed)	0.09	0.70	0.41	0.70
CEI: Marketing Communication	Pearson Correlation	0.07	-0.02	0.2	-0.1
	Sig. (2-tailed)	0.65	0.87	0.16	0.48
CEI: Infrastructure	Pearson Correlation	0.23	-0.12	0.18	-0.27
	Sig. (2-tailed)	0.12	0.41	0.22	0.06
CEI: Volunteer Management	Pearson Correlation	0.16	0.07	0.02	0.05
	Sig. (2-tailed)	0.27	0.61	0.89	0.71
Total CEI	Pearson Correlation	0.19	-0.04	0.16	-0.11
	Sig. (2-tailed)	0.18	0.80	0.28	0.45

The results from these figures that reach or approach statistical significance are summarized in the following figure.

Figure 46: Correlations Between CEI Subscales, FVI Subscales, and Changes in FVI Subscales, p<.05

Correlated Variable 1	Correlated Variable 2	Pearson Correlation	Significance
CEI Marketing & Communication	2008 FVI	-.33*	.018
Total CEI	2008 FVI	-.29*	.038
CEI Leadership Culture	Change in FVI Equity 2008-2010	.32*	.024
CEI Infrastructure	Change in FVI Equity 2010-2012	-.27	.058
CEI Community Collaboration	Change in FVI Concentration 2010-2012	.24	.091

In 2008, total FVI and CEI scores showed a statistically significant negative correlation, suggesting that organizations with higher CEI scores were more likely to show lower FVI scores in that year. No statistically significant relationship was found between total FVI and total CEI scores in 2010 or 2012.

Disaggregating the subscales on both tools revealed two statistically significant findings. The first was a negative correlation between 2008 FVI scores and scores on the Marketing and Communication subscale of the CEI. Organizations with higher scores on the Marketing and Communication subscale of the CEI were more likely to show lower FVI scores. Since higher FVI scores indicate higher levels of vulnerability, this suggests that organizations with lower levels of

financial vulnerability in 2008 had higher levels of competence in marketing and communication, as measured by the CEI, in 2010. This test also revealed a positive relationship between the CEI's Leadership Culture subscale and changes in the FVI's equity component. Organizations with increases in the equity term of the FVI between 2008 and 2010 were more likely to have higher scores on the Leadership Culture subscale of the CEI. While the additional two findings were not significant at the $p<.05$ level, they are included in the following table for the purposes of informing future studies of CEI results.

The two findings that do not attain statistical significance at the $p<.05$ level are a potential negative correlation between the Infrastructure subscale of the CEI and the change in the equity term of the FVI between 2010 and 2012, and a potential positive correlation between the Community Collaboration subscale of the CEI and the change in the concentration term of the FVI between 2010 and 2012. This suggests that further exploration of these relationships may be warranted in future studies.

All of these results must be considered in conjunction with the large number of correlation tests that were run on this sample. The meaning of the $p<.05$ standard is that on this basis we accept results that we would expect to see by chance in less than five percent of all cases. In this case, these results show three statistically significant results as a result of correlating six CEI variables against 27 financial variables. This means that 162 bivariate correlations were run. With a standard of $p<.05$, we should expect about eight statistically significant results if the data is completely random. Since this study is exploratory, these results are being reported, but their statistical 'significance' is very weak. To strengthen these tests, the p-value cutoff should be divided by the number of tests run. Were I to take this step, the threshold these correlations would need to meet to attain statistical significance would become $p<.00039$, a standard none of these suggested correlations meets.

The theoretical and practical implications of these findings will be discussed at greater length in the following chapter.

Chapter 5: Discussion

This study was designed to explore the resilience of a set of nonprofit organizations in the state of Texas as these organizations underwent the Great Recession of 2007-2009. In compiling the necessary information to explore the research questions described at the close of the third chapter of this document, two discoveries were made. First, far fewer organizations from the sample had consistent financial information available from Form 990 than anticipated. Second, the organizations with full available financial information did not show a major shift in financial performance in the 2007-2009 timeframe.

Organizations were included into this sample based on their completion of the Community Engagement Index (CEI) in 2010, not on their financial scope, their legal requirement to file a full Form 990, or the consistency of their 990 records during the time period sampled. As a result, some attrition was expected since some organizations had religious missions and were thus able to exempt themselves from filing Form 990 (Internal Revenue Service, n.d.) and from the fact that some of the teams completing the CEI were representing small sub-segments of larger organizations, such as the ACE tutoring program. A Community for Education, known as ACE, is an early literacy program that trains tutors and incorporates them into public schools to serve students in early primary school. The program is housed within the Charles A. Dana Center, a research organization with several educational initiatives spanning from pre-kindergarten through higher education and including continuing education programs as well. The Dana Center, in turn, is one component of the University of Texas at Austin. ACE does not file its own tax return, nor does it have its own 501(c)(3) status. Rather, it operates under the large umbrella of the University of Texas at Austin. The impact of the community engagement of the ACE program is a minute portion of the University of Texas at Austin. As a result, ACE was omitted from the sample to be examined due to

its diluted impact on the financial performance of an entity as large as the University of Texas at Austin.

Prior to purchasing access to the DataWeb from the National Center of Charitable Statistics (NCCS), there was no easy way to determine which of the organizations from this sample would have financial information available for the period in question. Data released on Form 990 is considered to be highly reliable and accurate (Froelich, et al., 2000), and is expected to be available for all organizations with over $200,000 in annual revenue and over $500,000 in assets (Internal Revenue Service, 2014c). After I was granted access to the NCCS DataWeb through the generous support of the RGK Center at the University of Texas at Austin, I discovered that very few of the organizations in the sample were included in the DataWeb's Statement of Income reports. These are the only digitized data files from NCCS that include sufficient information about the breakdown of expenses by program, management, and fundraising as is required to calculate the FVI of an organization in a given year.

In addition to the issue of insufficient categorization of expenses in the Business Master Files of the DataWeb to calculate FVI, I discovered an additional concern. NCCS makes data available from 'snapshots' of the full database at differing points in time. Rather than categorizing the information based on the year of the return being filed, these results are time-stamped with the month during which they were pulled from the total database. Since many organizations use different financial years, categorizing filings by year can be challenging. Many organizations use the calendar year for their financial reporting, and run their financial reports from the first of January to the 31st of December. Since educational institutions and programs that work with them usually follow the academic year, however, many schools and academic support organizations run their year from the first of July to the 30th of June. Other organizations may start and end their financial years on any

arbitrary date: this is a decision every organization makes independently (Internal Revenue Service, 2015b). Moreover, once a financial year has been determined, nonprofits must complete and file their information by a given deadline, but there are extensions to these deadlines available. Given that investment return information may not be available until much later in the year, there is no clear date upon which NCCS can take a snapshot and gather the filing information from a given year without overlap from returns from different years.

As an example, imagine two organizations. Organization A follows an academic calendar and completes its financial year on June 30th, 2010. With few investments, this organization is able to file a tax return by July 10th, 2010. In contrast, Organization B holds a sizeable endowment with a complex investment history. Organization B closes its financial year on December 31st, 2009, but may not receive full financial reports on its investments until September 2010 and thus files its tax return on the first of October, 2010. Imagine that, late in 2010, the board of Organization B concludes that the investment portfolio is not worth the expense and hassle, and reverts to simpler financial tools with more straightforward reporting that is available earlier in the year. As a result, Organization B is able to file its 2010 tax return on the first of February, 2011. If NCCS takes a snapshot every six months on the fifteenth of August and of February, these snapshots will completely miss the 2009 filing from Organization B.

Given this limitation of the 'snapshot' approach to data summary, I decided to purchase a custom data pull from GuideStar in addition to the data available from NCCS. GuideStar tracks the year of filing on Form 990 itself, hopefully minimizing the snapshot issue described above. Unfortunately, even with the union of these two sources, the rate of intermittent filing of the 990 was forty percent. In other words, in a sample of 80 organizations, 32 had skipped at least one of the 990 filings after their first filing and before the close of the 2012 time period. Moreover, there were additional gaps

in the information. For example, 2004 was missing filings from 39 organizations, and no information about the segmentation of expenses between administration, program, and fundraising categories was available for 2006. I documented these issues and contacted GuideStar to verify that no data had been overlooked, and no additional data was found. This suggests that some portion of the issue may be in the digitization process utilized by GuideStar to capture this information. Unfortunately, the scanned copies of the 990 provided online by GuideStar only include the most recent three filings for unpaid accounts, and the most recent six for paid access. Even the paid access would not fill the largest gaps in data, which are in 2004 and 2006. Extensive web and library searches and explorations of the websites of these organizations individually, as well as a perusal of https://archive.org/details/IRS990 and the filings of Form 990 available through that source, revealed no data to fill these gaps in 990 filings. The following calculations are based on the aggregation of information from these sources.

There is not enough data available to determine whether the missing 990s were due to major declines in the resources of the organizations which caused them to fall under the IRS-designated cutoffs (assets of less than $500,000 or revenue of less than $200,000), or whether those returns were omitted due to late filings or other challenges in the digitization process. Further, even for those organizations with strong and consistent performance both before and after the gaps in their 990 filings, the various components of the FVI vary sufficiently as to render interpolation of FVI values suspect. Therefore, data outside of the consistent ranges of filing for these 32 intermittent organizations was excluded from analysis. This left a sample of 29 organizations with consistent filing records from 2000-2012, and 50 organizations with consistent filing records from 2008-2012.

This exploratory study was intended to cast light on the performance of these organizations during the recession. In this sample, little impact from the recession was seen either in traditional financial

indicators or in FVI as defined by Greenlee and Trussel (2000). Organizations were included in this purposive sample due to their involvement with a funder or coalition with an interest in effective volunteer and community engagement. Without further detail it is difficult to attribute the stable performance of these organizations through the recession to any one factor. Still, three possible explanations arise.

First, the sample itself is small. The changes due to the recession could well be visible with a larger sample. The organizations to be included in this sample were selected and the CEI was administered to them in 2010. While GuideStar's website includes scans of Form 990 for many organizations for the last three filings, the purchase of access to the full databases of information were made in 2015. As a result, the scans were of little help in filling in gaps prior to the final period under consideration, 2012. It was clear that some of the organizations would not have full 990 filings available for the early samples in the time period due to the dates upon which they received their 510(c)(3) designation from the IRS, but this challenge turned out to be less of an issue than was intermittent filing. Twenty-two of the organizations in question received their public charity status in 2000 or later, but 32 of the organizations showed filing gaps in the data received from GuideStar and NCCS.

Second, national and local data suggest that Texas fared better than most states during the Great Recession of 2007-2009, and that Austin fared better than most of Texas. From the Urban Institute's analysis of nonprofit organizations receiving government funding, fewer Texas organizations were seeing fewer issues with layoffs, salary freezes or reductions, program reductions, or benefit reductions than most of the nation in 2009 (Boris, et al., 2010). While Texas as a whole was faring better than the national average, Austin was faring better than most of Texas on average. The Greater Austin Chamber of Commerce describes a city with several large industries that are

recession-resistant, including education, health care, and government (Greater Austin Chamber of Commerce, 2015). Further, Austin is considered to have the twenty-sixth best-educated populace in the nation (Bernardo, 2014), with the next best-educated city in Texas listed as Houston at number 56. In the Great Recession, education was a critical determining factor in predicting how well families' savings came through the crisis. Households with a head of house with a high school degree or less education lost an average of $33,000 in net worth between 1999 and 2009, with most of the loss focused between 2007 and 2009 (Bernardo, 2014). As a result, Austin's highly educated workforce should have a stabilizing effect on the financial position of its population.

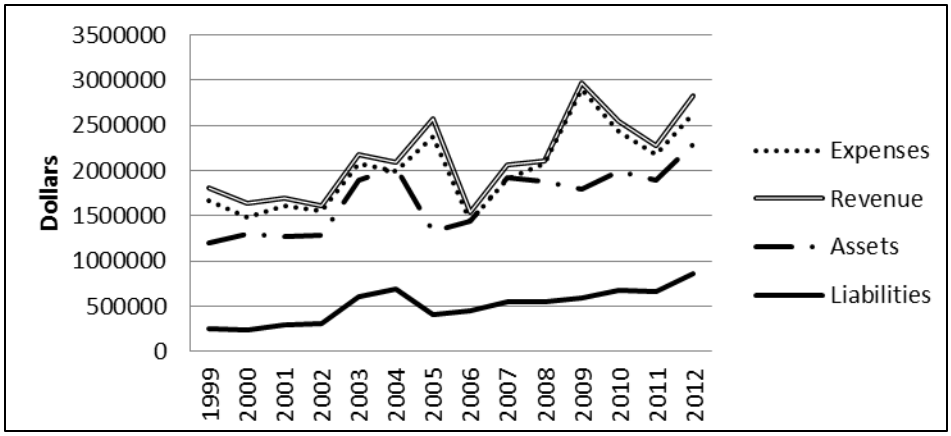
Third, these organizations were included in this study because they completed the Community Engagement Index in 2010. This means that they were affiliated either with a coalition or a funder that was actively supporting effective volunteer management and community outreach practices. The fact that no meaningful negative effect from the Great Recession can be seen in this sample may be an indication that these organizations were already utilizing their community connections and volunteer resources to strengthen their organizations prior to taking the CEI. If it is true that organizations respond to the priorities of their funders (Carman, 2009), the fact that the OneStar Foundation, TRIAD, and the Literacy Coalition of Central Texas were interested in community engagement may have inspired these organizations to be more intentional about community engagement prior to completing the CEI. This hypothesis could be tested by building a paired control sample mirroring this group of nonprofits and comparing their financial performance to this sample's financial performance over the period from 2000-2012.

Despite these challenges, some interesting patterns emerged from this sample. First, adjusting for the large amount of inflation during this time period was a key factor in creating graphs that depicted the financial performance of these organizations accurately. At first glance, these

organizations appeared to be growing comfortably during the time in question. Once the inflation rate of 33% over the course of the period had been included in these calculations, their growth curves became far less consistent and more tumultuous. In addition to the turmoil created by unknown future rates of inflation, these organizations endured dramatic changes in real estate valuation during this time. While the housing crisis that gripped the rest of the nation may have been mitigated by Austin's continued growth during this period, real estate is a large investment for many organizations. Fluctuations both up and down in real estate values can wreak havoc with an organization's financial statements and with its property tax bills and rent as well.

Second, once organizational revenue was controlled for organizational size, the trend line became far less tidy. While the trends were still upwards, the progress was much less smooth.

Figure 47: Inflation-Adjusted Financial Indicators, 29 Consistent Filers, 2000-2012



While inflation-adjusted revenue for the sample rose substantially from 2009 to 2010, the gap between these lines is the accumulation of net assets for the organizations in that year. From 2009 to 2010, these lines are so close as to be indistinguishable on this graph, suggesting that revenue and expenses were far closer together than in 1999. While these organizations may have been able to stay in business, this decrease in financial cushion or 'net income' reflects higher financial stress on these

organizations. This lack of cushion is a sufficiently important indicator of financial sustainability that it is included as one of the factors in calculating the FVI: the 'margin' factor.

FVI Components

The FVI is calculated through an equation that includes four separate ratios. The margin factor is calculated by subtracting the organization's annual expenses from its annual revenue, then dividing that value by the annual revenue. The output of this calculation indicates what percentage of the organization's revenue will remain with the organization after all expenses are paid. This is similar to the calculation of the gross profit margin in the for-profit world. This term is negative in the FVI calculation, meaning that a higher value for the 'margin' term in the FVI calculation correlates with a lower FVI. This makes sense because it suggests that organizations able to retain some revenue beyond their expenses will have lower levels of financial vulnerability. In other words, if the organization makes some money beyond its expenses each year, it will be more financially sustainable than an organization with expenses that are equal to (or greater than) its annual revenue.

The next component of the FVI is the 'equity' component. Similar to the equity ratio calculated by for-profit firms, this is an examination of an organization's assets in comparison to its liabilities. This term is calculated by subtracting total assets from total liabilities, then normalized by dividing by annual revenue. While revenue and expenses are typically quite liquid, assets and liabilities may be less liquid. For example, a real estate asset may have substantial book value but is not easily liquidated at that book value in the event of an emergent financial crisis. Further, nonprofits often receive restricted funds that are donated for a specific purpose and cannot be utilized to support the organization's administration function. Liabilities such as long-term mortgages may be difficult to reduce with little notice. Still, there may be some flexibility with some of these resources, especially over time. Tuckman and Chang explain that they include this ratio for four reasons. Assets may be used to collateralize loans, they may be sold off over time, some assets may be liquid over a longer

time span, and the organization may modify its services to utilize restricted funds more quickly (Tuckman & Chang, 1991). While assets and liabilities may not be as easy to modify in the short term, a stronger asset position relative to liabilities still reduces an organization's FVI score, though by a smaller amount than the margin factor.

Third, the FVI considers an organizations revenue stream concentration in the 'concentration' factor. This calculation is based on a Herfindahl-Hirshmann Index of an organization's revenue streams, and provides a value between zero and one indicating how diversified the organization's funding streams are. This term is calculated by dividing each of five revenue streams by total revenue, then squaring that value. The five revenue streams are as follows: program service fees, membership dues, sales of unrelated goods, investment income, and finally contributions, gifts and grants. Note that this fifth revenue category would include gifts from individuals, contracts from government sources, and grants from philanthropic institutions. As a result, the FVI does not allow for differentiation between public and private contributions. Organizations with lower values of revenue concentration receive lower scores on the FVI, because greater diversification of revenue streams is expected to increase financial resilience (Tuckman & Chang, 1991).

The fourth term in the FVI is the 'administration' factor. Tuckman and Change suggest that in difficult financial times, nonprofits have the option of reducing their administrative expenses, and thus that organizations with a higher percentage of their expenses stemming from the administrative category will be able to avoid cuts to programs more successfully than peers with lower administrative expenses as a percentage of their total expenses (Tuckman & Chang, 1991).

Funding Stream Blend: Public Versus Private

When the initial analysis of the financial factors revealed no meaningful drop in revenue during the time of the Great Recession, I began to search for explanations. The first is that the recession hit

Texas later than it hit other states (Financial Crisis Inquiry Commission, 2011) and was not as severe in central Texas as in most parts of the country, thanks to recession-resistant industries and consistent growth in the Austin metropolitan service area (Greater Austin Chamber of Commerce, 2015). Beyond this, I was curious about whether these organizations shifted their portfolio of funding streams. Did these organizations gain more funding from grants and contributions, or were public dollars from local, regional, state, and federal governments increasing their support of public service organizations?

This information is more difficult to track due to the redesign of Form 990 in 2008. The new form was released in 2007, and organizations had the option of filing either the old or the new version of the form in 2008, and were expected to have switched to the new version by 2009 (Internal Revenue Service, 2014a). The new Form 990 includes a far more detailed breakdown of funding sources than the previous version, allowing for a glimpse into the way that funding streams shifted from 2008 (for those organizations choosing to file the new 990 in 2008) to 2010 to 2012. Since the previous version of the form did not include this information, there is not a baseline before the 2008 sample to which to compare funding stream levels. The funding streams considered in the FVI do not differentiate between public and private dollars: all such support is grouped together in the 'contracts, gifts and grants' stream in the FVI. Because this data was not available for the entire time period under analysis, this data fell outside the scope of this study and was not purchased as part of the data request from GuideStar.

Inactive Organization Purge

Along with the redesign of Form 990, the time period under examination contains another major change from the IRS: a purge of inactive 501(c)(3) organizations which took effect in 2011. The Pension Protection Act of 2006 (Department of Labor, 2006) included stipulations requiring all nonprofit organizations, even those with less than $25,000 in annual revenue, to file a tax return.

Organizations that went three years without filing a tax return had their tax-exempt public charity status revoked in 2011. This purge eliminated over 275,000 organizations, though roughly 10,000 then re-activated their public charity status by filing their returns (Hrywna, 2012). To verify that this hadn't been an issue for the organizations in the sample that did not file in 2012, I checked their status through the IRS Exempt Organizations Select Check (Internal Revenue Service, 2015a) and confirmed that none of the non-filers from 2012 in the sample of 80 being examined for this study had lost their public charity status permanently due to the 2011 purge.

Findings from Research Question One

The first question considered through the lens of this data was about how this sample of nonprofits in the state of Texas fared during The Great Recession of 2007-2009. I reprint the question below for the reader's convenience.

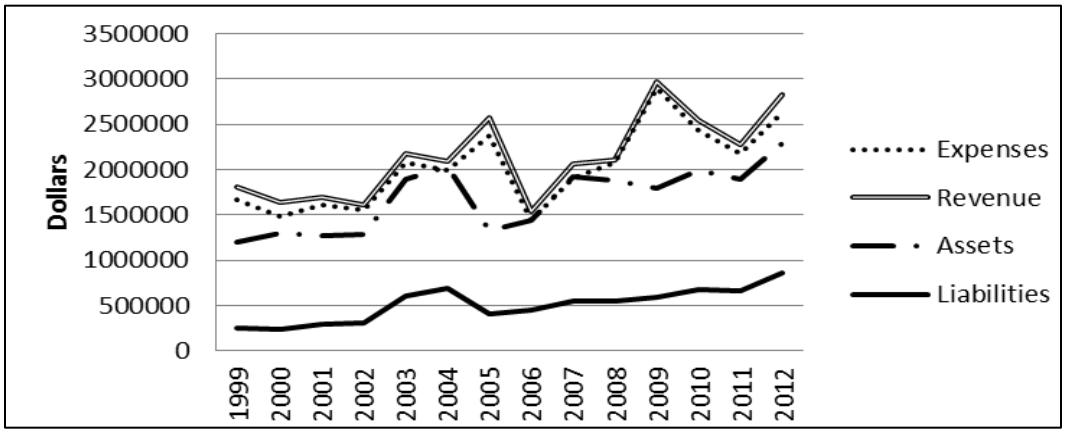
Research Question 1: How did the Great Recession of 2007-2009 affect a purposive sample of nonprofit organizations in the state of Texas?

Hypothesis A: Older organizations were less affected by the financial downturn due to the reputational bias of age.

Hypothesis B: Larger organizations were less affected by the financial downturn due to the larger sizes of their budgets.

Hypothesis C: Controlling for findings from age and budget size, human services organizations showed lower FVI values than their peers in other NTEE categories, both during and after the Great Recession, mirroring national trends during this time.

Figure 48: Financial Indicators, 29 Consistent Filers, Adjusted for Inflation, 2000-2012



As mentioned earlier, this sample did not show a big drop during this time period. While Figure 40 shows that revenue and expenses were closer together for the sample of 29 organizations between 2008 and 2010 than in the rest of the years from 1999 to 2012, the upward trend in the sample's revenue is more pronounced than before this time. There is a decline after this time, but even after adjusting for inflation, these organizations as a group brought in more revenue in 2011 than in 2008. Based on this sample, the largest drop in real revenue was between 2005 and 2006. The data provided by GuideStar from the 2008 to 2010 timeframe did not break down funding sources by their public versus private status. In other words, the data provided by GuideStar did delineate between the funding streams defined by Tuckman and Chang (1991), but did not delineate between funds from individuals, funds from foundations, and funds from government sources. As a result there is not an easy way to confirm whether the spike in revenue from 2008 to 2010 was from local, state, or federal government sources attempting to ease the effects of the recession. I was able to find some information about funding received from universities and local government programs for this purpose, but the organizations in this sample were not included in the data sources I was able to find.

To bolster these findings, I reached out to the large organizations in the sample with increases in revenue in 2009 to ask about their impression of the causes for this increase. Of this sample, two organizations were affiliates of Goodwill. I learned that Goodwill's revenue stream was affected more dramatically by shifts in retail purchasing than by changes in government funding. "Nordstrom shoppers went to Target, Target shoppers went to Wal-Mart, and Wal-Mart shoppers came to us," explained Jed Miracle, Senior Finance Director of Goodwill Industries of Central Texas (Miracle, 2015). One organization completed a capital campaign and opened a new facility during that time period. Other finance professionals mentioned sequestration and various organizational events unrelated to the Great Recession as major drivers in the shifts in their income patterns during this time.

In brief, the answer to Research Question One is that the Great Recession did not appear to have much of an effect on this purposive sample of 29 organizations. Revenue appeared to increase, but not in an unprecedented way: the rate of increase is roughly equivalent to that seen between 2002 and 2003, and again between 2006 and 2007 (see Figure 33 for visual representation of these inflation-adjusted financial indicators). The increase appears to have lasted longer than during those times, and the margins may have been smaller, but the time frame of the recession does not stand out from the rest of time under examination in a startling way.

An examination of this time period through the lens of relative revenue, to address the fact that the largest organizations may be overshadowing smaller organizations in summative calculations, shows no clear pattern during the recession timeframe. After removing a few outliers with unusually high relative revenues, the remaining 23 organizations show an array of different performances on this financial metric with no clear trend (see Figure 13, Relative Revenue Growth, 23 of 29 Consistent Filers, 2002-2012 for graphical representation of this point). The recession is similarly difficult to

pinpoint when considering how many organizations saw increases in revenue during each year. The big change is visible in Figure 14 in 2010: almost three times as many organizations saw revenue growth between 2009 and 2010 than saw decreases in revenue.

To confirm, again, that increases were not being allocated disproportionately to larger organizations, the sample was divided into three groups based upon the organizations' budget sizes in 2000. Figure 15 shows that while the increase in revenue for the largest organizations (those with over $2 million in annual revenue in 2000) is most visible, the mid-sized organizations (those with between $800,000 and $2 million in annual revenue in 2000) also saw an increase in revenue during this time. Revenue for organizations with less than $800,000 in annual revenue appears to be flat during this time, but increased between 2010 and 2012.

One metric that showed some change during the time of the recession was the FVI. Figure 19 shows that the number of organizations in the 'financially vulnerable' category increases steadily until 2008. The number of organizations in the 'not financially vulnerable' category then increases in 2010 and 2012. This is a different perspective than that offered by the other metrics considered. By revealing an increase in financial vulnerability in this sample during the time of the Great Recession, these FVI scores are providing additional information about these organizations and their financial stability not conveyed by a consideration of financial metrics such as revenue or asset levels.

Divisions of the sample by organizational age and budget did not reveal statistically significant differences in performance. The fact that the younger organizations in the sample showed higher levels of revenue than their older counterparts may be revealing interesting information, or may be an aberration caused by the small sample size, given that the two groups were not shown to be statistically significantly different by an independent samples t-test.

The small size of the sample made statistical significance especially difficult to attain for the comparison of human services organizations to organizations with other mission categories, since 20 of the 29 organizations in this sample fell into the human services category.

CEI Findings

After considering the performance of these 29 organizations over the time period between 2000 and 2012 from a strictly financial perspective, I included the Community Engagement Index (CEI) in my analysis. Since CEI scores were only collected from this group of organizations in 2010, longitudinal analysis of the CEI is not possible. However, I was curious about how CEI scores would vary along with financial indicators. Would there be a relationship between the dimensions of community engagement measured by the CEI and financial performance in the years around 2010?

Because I had spent so much time with this sample of 29 organizations, I ran some tests with this group prior to augmenting my sample with those organizations with consistent 990 filings in 2008, 2010, and 2012. When this analysis showed no significant results, I considered the terms of the FVI individually in relation to the subscales of the CEI. A statistically significant relationship between organizational margin and the Leadership Culture subscale was visible, as was a trend of correlation between the CEI's Community Collaboration subscale and the FVI's Concentration term that neared statistical significance in 2008 and attained significance in both 2010 and 2012. Before discussing this finding, I reiterate that the number of bivariate correlations run in this study was large, and while these findings were statistically significant at the $p<.05$ level, the expectation is that with so many tests being run (72), three or four would be significant at this rate by random chance on average. Given the exploratory nature of this study, however, I will review these findings as a precursor to further exploration of the potential relationship between the FVI and the CEI.

Figure 49: Correlation of Disaggregated FVI Terms and Disaggregated CEI Subscales, N=29 Consistent Filers, p<.05

FVI Variable	CEI Variable	Pearson Correlation	Significance (2-tailed)
2010 FVI: Margin	CEI: Leadership Culture	-.382*	.041
2008 FVI: Concentration	CEI: Community Collaboration	.351	.062
2010 FVI: Concentration	CEI: Community Collaboration	.393*	.035
2012 FVI: Concentration	CEI: Community Collaboration	.422*	.023

The negative correlation between Leadership Culture CEI subscale scores with financial margin in 2010 is intriguing. This suggests that organizations with pervasive support for volunteers saw narrower margins in 2010. Again, without information about the breakdown of the funding streams supporting these organizations during this time frame, there is no way to know if the increases in revenue were driven by recession recovery stimulus government funds, or from other sources. What the data do show is that expenses were increasing at least as quickly as revenue, given the overall reduction in margin visible in Figure 33 during this time. Government funding is known to be expensive to obtain and to carry burdensome reporting requirements, often causing the type of margin compression seen during these years in the sample (Brooks, 2000; Gronbjerg, 1991). One hypothesis about this pattern would be that these organizations with strong leadership teams and supportive cultures were able to bring in more government dollars during these years.

The fact that the Concentration term of the FVI and the CEI's Community Collaboration subscale show a pattern of correlation suggests that there may be a non-random driver for this relationship. The weak to moderate relationship shown in 2008 is included because of the statistical significance of the relationship in 2010 and 2012. The Concentration term of the FVI is an indicator of how

consolidated the organization's funding streams are. The pattern revealed in the analysis of these 29 organizations suggests a relationship between organizations with stronger community collaboration efforts and higher rates of revenue concentration. In other words, the data suggest that organizations with less funding diversity are more likely to collaborate with individuals and organizations across organizational boundaries. This relationship becomes slightly stronger as the years pass. One possible explanation would be that these organizations were able to utilize their strong collaborations to bring in government funding during the recession, and were then consolidating their funding base back to its pre-recession levels and positions after that funding expired.

Considering the 50 Organization Data Set

Having considered the relationship between the FVI and the CEI with the original 29 consistent-filing organizations from Research Question One, I added the 21 organizations that had filed consistently in 2008, 2010, and 2012. Statistical analysis of the 50 organization set with these same tests failed to show any statistically significant results. I then considered changes in the terms of the FVI, thinking that while organizations might have started at different points on these terms of the FVI, the impact of any regional financial fluctuations might cause simultaneous movements among many of the organizations in the sample.

Figure 50: Correlations Between CEI Subscales, FVI Subscales, and Changes in FVI Subscales, p<.05, 50 Organizations

Correlated CEI Variable	Correlated FVI Variable	Pearson Correlation	Significance
CEI Marketing and Communication	2008 FVI	-.33*	.018
Total CEI	2008 FVI	-.29*	.038
CEI Leadership Culture	Change in FVI Equity 2008-2010	.32*	.024
CEI Infrastructure	Change in FVI Equity 2010-2012	-.27	.058
CEI Community Collaboration	Change in FVI Concentration 2010-2012	.24	.091

The relationship between the total FVI in 2008 and the Marketing and Communication subscale of the CEI appears to be the driver of the statistically significant relationship between total CEI scores and 2008 FVI scores, given that they are both negative correlations and the effect size of the Marketing and Communication is greater than that for the total score. This suggests that organizations with lower levels of financial vulnerability during the Great Recession may have exited the recession with stronger marketing and communication practices than their less financially stable peers. This may support a hypothesis that organizations in financial distress are less likely to devote adequate resources to marketing and communication efforts.

This test revealed a statistically significant relationship between changes in the Equity term of the FVI between 2008 and 2010, and scores on the CEI Leadership Culture subscale. The Equity term of the FVI measures total equity divided by total revenue. Equity is the remaining value after

liabilities are subtracted from assets. By the FVI algorithm developed by Tuckman and Chang and confirmed by Greenlee and Trussel, a higher equity term is considered to increase an organization's financial vulnerability (Greenlee & Trussel, 2000; Tuckman & Chang, 1991). Their argument is that because assets are less liquid than revenue, organizations must be careful to manage their cash flow and liquidity as well as their balance sheet. Additionally, these organizations may not be bringing in sufficient revenue to survive a drop in the value of their assets. Many less liquid assets, such as real estate and long-term investments, may fluctuate in value dramatically both in book and market value, and the organization will be exposed to all of these fluctuations. Further, increases in the value of real estate and investment assets may require the organization to provide cash to cover taxes on increases in value. As a result, the Equity term of the FVI is relevant to a consideration of an organization's financial sustainability. Thus, the finding of a positive correlation between increases in FVI Equity followed by a higher score on the Leadership Culture subscale of the CEI suggests that an organization with a higher ratio of equity to revenue over the two-year period prior to the administration of the CEI might be shown to have a leadership team and culture that are more actively supportive of volunteers by the CEI's measures.

With CEI data in only one year, it is difficult to figure out which of these factors is driving the other. This could be suggesting that organizations with strong leadership support of volunteers are less reliant on revenue due to their support from volunteers. Conversely, it could be suggesting that as revenue drops, organizations become more careful in taking care of their volunteers. While these attitudinal shifts are not reflected in the data set upon which this study is based, the various factors for the FVI calculation are. While there is no statistically significant difference between the mean change in revenue for the top-scoring half and the bottom-scoring half of the sample on the CEI Leadership Culture subscale, there is a meaningful difference in asset growth. The lower-scoring half of the sample shows a mean increase in assets of 12.5%, while the higher-scoring half of the sample

shows a mean increase in assets of 72.3%. It is hard to argue that a dramatically higher rate of asset growth during this time period is a negative trait from an organization-wide perspective, but it does lead to an increase in this equity term of the FVI calculation.

In addition to this statistically significant finding, two additional correlations approached statistical significance: a weak to moderate negative relationship between CEI Infrastructure subscale and changes in FVI Equity between 2010 and 2012, and a weak to moderate positive relationship between the CEI's Community Collaboration subscale and changes in FVI Concentration between 2010 and 2012.

The first correlation that nearly attained statistical significance was the relationship between higher scores on the Infrastructure subscale of the CEI and reductions in the Equity term of the FVI between 2010 and 2012. The equity term was discussed above. The changes between the top and bottom halves of the distribution of the Infrastructure scale and the components of the Equity term of the FVI are very different from those seen between 2008 and 2010 when examining the Leadership Culture subscale of the CEI above. In this case, the higher-scoring organizations on the CEI subscale show much greater increases in revenue over the 2010 to 2012 time frame, thus reducing their overall Equity term scores. Recall that lower values of the Equity term are seen as positive indications of financial stability. Thus, the organizations with higher scores on the Infrastructure subscale are showing a suggestion of greater financial stability in the time period following the administration of the CEI.

The final correlation that approached statistical significance was that between the CEI Community Collaboration and increases in the Concentration term of the FVI in the following time period. Lower scores on the Concentration term are expected to drive financial stability, so this shift suggests that higher scores on the Community Collaboration subscale in 2010 may correlate with

higher revenue concentration and thus higher financial vulnerability in 2012. However, given that this is the first full time period after the Great Recession of 2007-2009, this may suggest that organizations with stronger community collaboration practices were able to leverage more of the government funding that was made available to help the nation through the financial crisis, and this is the return to a previous level of revenue consolidation after that unusual event.

While this study did not unearth a statistically significant relationship between overall CEI scores and financial indicators, the fact that these values are not related suggests that the CEI is bringing a new dimension to organizational analysis that is not addressed by strictly financial metrics such as those used by Charity Navigator (2014a) or the percentage of revenue allocated to programs, which is the most common metric by which nonprofit organizations are evaluated by individual donors (Hope Consulting, 2010). These organizations leverage thousands of volunteers: based upon responses to the CEI from the original sample of 125 organizations, these organizations alone engage more than 12,000 volunteers annually. While these organizations are not showing a statistically significant difference in financial performance based on CEI scores, these organizations were selected to complete this survey by coalitions and foundations that support them and also support effective volunteer engagement.

Practical Implications of the FVI and CEI

Despite the lack of statistically significant findings, this study has clarified several issues. The first is that donors cannot be expected to rely on information based on 990 findings if those findings are not easily available. Granted, recent 990s are relatively easy to download from GuideStar or to request from individual organizations, but in the face of a financial crisis a funder might want to consider the organization's performance during previous financial downturns, or the organization's past history of financial vulnerability. If this historical information is not easily available or has to be purchased from a source like GuideStar, donors may not bother to pay to do this research. If

nonprofit organizations want donors to be more proactive in comparing multiple organizations before giving, they should consider making their recent financial statements available on their websites, as does Any Baby Can (www.anybabycan.org /about/financial-documents). Given that the information conveyed by the FVI does not correlate with any of the traditional financial metrics that are often reviewed in the grant approval process, this information could be a helpful tool to donors and grantmakers of many sizes as they consider various funding recipients.

Beyond the challenges of relying on filings of Form 990 for studies of predetermined groups of nonprofit organizations, this study has revealed that both the FVI and the CEI have valuable information to convey to internal and external stakeholders, above and beyond the traditional financial metrics from Form 990 or a typical annual report. Not only are the total scores on these indices informative, but their subscales contribute unique information as well.

FVI Practical Implications

FVI scores could be helpful to nonprofits, both in sum and in components. Beyond monitoring their FVI annually, the components of this index can be disaggregated and used as part of a decision-making process. Having a quantifiable metric whereby to discuss funding stream diversity can be a useful tool in discussions about whether pursuing a new funding opportunity would be worth the effort. Often, organizations are tempted to stay with funding streams wherein they have successful track records. As the Concentration term of the FVI makes clear, even the addition of a new stream bringing 10% of an organization's revenue when they are currently dependent on a single type of funding can make a difference, reducing their revenue concentration by almost 20%. Quantifying the benefit of revenue diversification may make a financial officer's job easier when trying to explain additional effort and possible expense involved in garnering support from a new provider.

The Equity term of the FVI demonstrates the importance of maintaining steady and increasing revenue streams even in the face of increases in assets. Board members or other interested parties not familiar with an organization's finances may see a large gift of land or locked-up stock as an unmitigated benefit. This term helps to explain the necessity for liquidity to balance out assets for three reasons: gaps between book value and market value, lack of liquidity, and expenses associated with illiquid assets such as taxes. Art museums have become painfully aware that gifts of works of art come with costs such as maintaining a climate-controlled storage space, maintenance and restoration. To be able to maintain these pieces, let alone to create, staff, and maintain an appropriate exhibit space, requires liquid cash regardless of the value of the pieces donated.

The Margin term of the FVI adds an additional component to the traditional comparison of revenue to expenses. It can be easy to think that as long as expenses are less than revenue, everything is fine. However, by dividing this value by revenue, this metric conveys how small the organization's marginal earnings are. If these margins are thin, the organization may be one unexpected expense away from reducing programs or closing its doors.

The Administration term of the FVI may be the most counterintuitive to most examiners of these components. Some viewers of this term may assume that lower levels of administrative expense would be better for an organization. The realization that administrative tasks are not fat to be cut from the budget but can be strengthening the organization in strong financial cycles in anticipation of reduction during leaner times is a perspective which may be new to many.

Practical Implications of the CEI

The information contributed by the CEI is focused on an organization's relationship with its volunteers, but that focus transcends the boundaries of the organization. As Drs. Rehnborg and Poole discovered when creating this tool, effective volunteer engagement cannot be relegated to a

single individual, or even a single department, of a nonprofit. Rather, it must pervade the organization from its leadership team through all employees and out into the community through marketing and collaborative efforts.

The Leadership Culture subscale focuses on necessary traits of the board, and addresses the organization-wide components of a volunteer-supportive organizational culture. This subscale also alludes to the breadth of volunteers an organization may welcome: from board members to students, from veterans to national service participants, potential volunteers are not homogeneous. This subscale includes several items clarifying that everyone in the organization contributes to the culture, and thus must be aware of the value of volunteers to build an organization with a true culture of community engagement. This subscale showed the only statistically significant relationship in the study. A correlation of changes in the Equity term of the FVI between 2008 and 2010 and the Leadership Culture subscale scores in 2010 showed that organizations with positive changes in Equity were likely also to have higher Leadership Culture scores. Further analysis of these organizations showed that these organizations showed a larger increase in asset value than their counterparts, suggesting that organizations with strong cultures supporting volunteers were able to increase their assets between 2008 and 2010 at a higher rate than their peers.

While the Leadership Culture subscale focuses on internal issues, the Community Collaboration subscale addresses an organization's ability to build and maintain bridges that cross the organization's external boundaries. The items on this subscale relate to an organization's ties to peer organizations, its engagement of outside voices in planning processes, and its proactivity in gathering feedback about its performance from internal and external perspectives. Organizations that score well on this subscale showed a suggestion of an increase in financial concentration in the time period following the administration of the CEI. This may suggest that organizations with stronger

connections to their surrounding communities were able to pull down the additional government support funding that was available to assist organizations and individuals in recovering from the Great Recession. Since the observed shift was between 2010 and 2012, it occurred after the recession and after most of the recovery funding had been distributed. Without further data about funding sources and their public and private ratios, it is not possible to verify or disprove this hypothesis.

The Marketing & Communication subscale of the CEI addresses outbound communication from the organization to the surrounding community, and awareness of the appropriate methods and channels for such communication. Additionally, it measures the organization's awareness and implementation of appropriate branding such as the utilization of an array of timely recruitment methods, approaches, and messaging. While these traits are important to recruiting volunteers and maintaining community awareness of an organization's programs and processes, this subscale did not show any meaningful relationships with any of the financial statistics or FVI components tracked in this study.

The Infrastructure subscale of the CEI details the necessary elements of an organization's underpinning structure which must be sufficiently robust to support both paid staff and volunteers. Issues such as allocation of needed space, supplies, computer hardware and software can make a big difference in a volunteer's experience with an organization. Beyond accommodating an organization's regular volunteers, this subscale specifically asks whether the organization shares resources with another organization through a partnership. This subscale considers whether an organization is proactive or reactive with resource allocation: does the organization take a holistic view of the people supporting it, and support them in return regardless of whether they are paid staff, volunteers, or resources shared with another organization? Organizations with this level of

awareness will score well on this subscale. It is possible that these same organizations might see a decline in the Equity term of their FVI in the following time period: in this sample, there was some indication that organizations with higher Infrastructure scores saw reductions in their Equity term between 2010 and 2012. Unlike the shifts seen above with an increase in the Equity term being driven by increased assets, this reduction in the Equity term was seen to relate to an increase in overall revenue. In the calculation of the overall FVI, decreases in the Equity term also decrease the odds of financial vulnerability, so this shift not only indicates an increase in organizational revenue but also an increase in organizational financial stability.

The final subscale of the CEI, Volunteer Management, is similar to a management assessment from a paid employee's perspective. From onboarding processes to bidirectional feedback opportunities and support structures, this subscale focuses on whether the organization is taking its management responsibilities towards its volunteers seriously. This subscale showed signs of a possible relationship with increases in expenses between 2008 and 2010. This could be due to volunteers who had been highly loyal during better financial times leaving the organization to seek additional income or to reduce financial outlay by completing tasks for which they had previously had enough financial capacity to pay, such as child care or cleaning their homes. Were this the case, the organization might have had to bring on paid staff – either these volunteers or other people – to fulfill the roles that had been filled by volunteers in better financial times.

One of the clever traits of the CEI is that its questions can be answered by individuals from any point inside – or outside – an organization. It can be completed by a volunteer who helps with a single event per year, a CFO who is paid or not, a board member, a staff member at a peer nonprofit, or even a potential funder. All of these perspectives would be valuable, and the similarity or differences in responses could be very informative. Nonprofit organizations could benefit from

collecting annual CEI responses from an array of stakeholders and monitoring it over time. These questions may not be asked on a regular basis in many nonprofits, but they could provide valuable feedback to an organization's decision-makers.

Limitations and Future Studies

The lack of consistency in filing of Form 990 in this sample was unexpected. The thought that forty percent of this sample of organizations with historical revenue levels of over $200,000 per year and asset levels of over $500,000 per year, thus meeting the IRS's requirements for filing a full 990, would skip one or more filings of the 990 was surprising. Because of this issue, the total size of this sample was far smaller than anticipated. To confirm that these results are valid for a broader population, this study should be replicated with a larger sample. Given that predicting financial crises is not easy, tracking CEI scores on an ongoing basis would be valuable both for research purposes and for internal management purposes within individual nonprofit organizations.

The second major challenge for this study was the lack of evidence of a recession in this sample of organizations. Since financial crises are difficult to predict, annual CEI scores would be helpful. As this repository grows, it can be used for internal assessments within nonprofits completing the CEI, and can also provide a helpful historical record when financial conditions shift.

These results would also be strengthened through further analysis of this sample in comparison to a similar sample of organizations that are not linked to the OneStar Foundation, the Literacy Coalition of Central Texas, or TRIAD. This information would be helpful as an indication of whether these organizations are performing differently from other nonprofit organizations in similar mission foci. Since these three coordinating organizations were sufficiently interested in effective community engagement practices as to take part in this study, it is possible that their previous work with the

nonprofits they support has already strengthened community engagement practices in these organizations in comparison to their peers.

Additionally, the fact that these supporting foundations and coalitions were asking organizations to complete these studies cannot be overlooked as a potential source of bias. If the individuals completing these surveys felt that their funding or support levels from these coordinating organizations would be influenced by their responses to the CEI, it is possible that their responses could have been biased. To address this, a future study should be based upon a random sample of organizations in a given geography. Potential respondents should be assured that their responses will remain confidential and will only be shared in anonymized fashions, and preferably only in aggregate. Without the motivation of a coordinating organization behind a survey, it can be difficult to garner responses, especially to a survey with 52 community engagement questions (a count that does not include any demographic questions). Moreover, gaps in filings of Form 990 in 40% of the sample would require that the new sample be two and a half times larger than the number needed to attain statistical significance. Further, since response rates to online surveys are roughly 25% (Penwarden, 2014), the survey must be sent to at least ten organizations for each expected response from an organization with a consistent filing history, or organizations must be selected based upon their filing history.

Additionally, a sense of the respondent organizations' history with volunteers in terms of the number of volunteers engaged on a regular basis would be helpful. For this study, the only information available was from self-reported demographics placed into broad buckets as part of the CEI. To understand how volunteer engagement changes over time, more specific data regarding the specific number of volunteers involved each year would be helpful as a portion of an annual CEI.

There is little research on how patterns in volunteering change during a financial crisis: such longitudinal information would be helpful to establish baselines prior to a future financial crisis.

The partnership between the authors of the CEI and the authors of the Core Capacity Assessment Tool (CCAT) has yielded the Service Enterprise Diagnostic, or SED, which integrates a broader view of organizational strengths beyond community engagement with academic rigor. One of the benefits of the SED is that this broader realm of analysis should address multi-collinearity concerns about the overlaps of the subscales of the CEI. This union of theoretical grounding from the CEI and the larger user base from the CCAT will hopefully yield a rich data set for future analysis.

Conclusions

This study revealed that this sample of Texas-based nonprofit organizations, when considered as a whole, was able to maintain its assets and revenue throughout the Great Recession of 2007-2009. While the results for the FVI and CEI did not reach statistical significance, the data show that both of these metrics capture information about nonprofit organizations that cannot be conveyed by the data usually reviewed by donors. Encouraging donors to review an organization's level of community engagement as well as its financial vulnerability – or lack thereof – could assist in encouraging donors to invest in nonprofit organizations with sufficient community engagement and financial stability to utilize the donor's dollars efficiently and effectively. If publication of FVI and CEI scores became more prevalent, donors of both money and time would be able to compare potential recipients of their largesse by relevant metrics that are not currently available easily to the general public.

Inconsistent filing of Form 990 is far more common that I would have expected, and must be considered and accounted for when constructing a sample for tests relying on financial data to be drawn from the 990. One option to address this issue would be to verify the filing history of

organizations within the sample prior to launching a survey. While a history of consistent filings would not guarantee future consistent filings, it could suggest an organizational pattern. Most studies of the nonprofit sector as a whole draw most of their information from large nonprofit organizations, as did the creators of the FVI. Because their sample was so large, it was easy for them to disregard any organizations with inconsistent filing history.

This is the first published exploration of raw FVI scores, and reveals their volatility. The information published by the previous architects of this metric (Greenlee & Trussel, 2000; Tuckman & Chang, 1991) revealed the rates of financial vulnerability in their samples by category, but conveyed no longitudinal data about how these scores shift over time. The rate of financial vulnerability in Greenlee and Trussel's sample of more than six thousand organizations was under seven percent(Greenlee & Trussel, 2000), while the rate for the full sample of filings of Form 990 that I examined was over forty percent. Since Greenlee and Trussel examined very large organizations, including all nonprofits in the United States with annual revenue of $10 million or more, this may suggest that smaller nonprofit organizations experience higher rates of financial vulnerability than larger organizations. Neither of the historical studies included an aggregated longitudinal component. In the future it would be interesting to explore the volatility of FVI scores and consider whether these absolute cut-off values deliver enough information, or whether trending information about how FVI scores change longitudinally might also convey important messages about organizational sustainability. Since previous authors did not discuss the volatility of FVI scores, no historical information is available against which to compare the findings from this study.

Though no statistically significant relationship was found between the FVI and the CEI, this study provides a unique summary of financial performance for a group of Texas organizations before and during the Great Recession, and depicts a nonprofit sector continuing to serve its community

throughout this time rather than faltering due to lack of available revenue. The potential correlations documented herein provide interesting questions to be answered by a future study predicated on a larger sample of organizations with community engagement data collected at multiple times. The Service Enterprise Diagnostic tool will hopefully provide this longitudinal information to allow this intriguing research to continue.

Appendix A: Organizations Included in Sample

29 Consistent Filers:

ALLIANCE FOR CHILDREN INC
ANY BABY CAN INC
AUSTIN HABITAT FOR HUMANITY INC
AVENIDA GUADALUPE ASSOCIATION
BIG BROTHERS BIG SISTERS OF SOUTH TEXAS INC
CARITAS OF AUSTIN
CEN-TEX CERTIFIED DEVELOPMENT CORPORATION
CITIZENS DEVELOPMENT CENTER
COMMUNITIES IN SCHOOLS OF SOUTH CENTRAL TEXAS INC
COMMUNITIES IN SCHOOLS OF THE HEART OF TEXAS
COMMUNITY & SENIOR SERVICES OF MIDLAND INC
CONNECTIONS INDIVIDUAL AND FAMILY SERVICES INC
EL BUEN SAMARITANO EPISCOPAL MISSION
FAMILIES IN CRISIS INCORPORATED
FAMILY SERVICE ASSOCIATION
GOODWILL INDUSTRIES OF CENTRAL EAST
GOODWILL INDUSTRIES OF CENTRAL TEXAS
GRAYSON COUNTY JUVENILE ALTERNATIVES INC
GREATER SAN MARCOS YOUTH COUNCIL INC DTD 08-01-89
LITERACY ADVANCE OF HOUSTON INC
MY SECOND CHANCE INC
PROJECT NORMALIZATION OPEN DOOR PRESCHOOL
SA YOUTH
THE BRIDGE
THE CHILDRENS SHELTER
THE PARENTING CENTER
UNITED WAY OF ABILENE
UNITED WAY OF SOUTHERN CAMERON COUNTY
YOUTH AND FAMILY ALLIANCE

50 Organizations in 2008-2012 Testing with CEI:

ALLIANCE FOR CHILDREN INC
ANY BABY CAN INC
ASCEND CENTER FOR LEARNING
AUSTIN HABITAT FOR HUMANITY INC
AVENIDA GUADALUPE ASSOCIATION
BIG BROTHERS BIG SISTERS OF SOUTH TEXAS INC
BOOKSPRING
BOY WITH A BALL MINISTRIES
CARITAS OF AUSTIN
CEN-TEX CERTIFIED DEVELOPMENT CORPORATION
CHRISTS HOME PLACE MINISTRIES INC
CITIZENS DEVELOPMENT CENTER
COALITION OF TEXANS WITH DISABILITIES INC
COLLEGE FORWARD
COMMUNITIES IN SCHOOLS OF SOUTH CENTRAL TEXAS INC
COMMUNITIES IN SCHOOLS OF THE HEART OF TEXAS
COMMUNITY & SENIOR SERVICES OF MIDLAND INC
COMMUNITY HOPE PROJECTS INC
COMMUNITY PARTNERSHIP FOR THE HOMELESS INC
CONNECTIONS INDIVIDUAL AND FAMILY SERVICES INC
DIGITAL WORKFORCE ACADEMY INC
EL BUEN SAMARITANO EPISCOPAL MISSION
EL PASO DIABETES ASSOCIATION INC
EXCHANGE CLUB CHILD ABUSE PREVEN- TION CENTER-AWARE CENTRAL TEXAS
FAMILIES IN CRISIS INCORPORATED
FAMILY SERVICE ASSOCIATION
GOODWILL INDUSTRIES OF CENTRAL EAST
GOODWILL INDUSTRIES OF CENTRAL TEXAS
GRAYSON COUNTY JUVENILE ALTERNATIVES INC
GREATER SAN MARCOS YOUTH COUNCIL INC DTD 08-01-89
IEA INSPIRE ENCOURAGE ACHIEVE
LITERACY ADVANCE OF HOUSTON INC
LITERACY COALITION OF CENTRAL TEXAS
MY SECOND CHANCE INC
ONE CHURCH ONE CHILD OF NORTH-NORTH CENTRAL TEXAS AND SURROUNDING
OPERATION HOMEFRONT INC
PROJECT NORMALIZATION OPEN DOOR PRESCHOOL
PROYECTO JUAN DIEGO INC
R O C K RIDE ON CENTER FOR KIDS
RESERVE AID INC
ROUND ROCK AREA SERVING CENTER INCORPORATED

SA YOUTH
SAN ANTONIO LIFETIME RECOVERY INC
THE BRIDGE
THE CHILDRENS SHELTER
THE PARENTING CENTER
UNITED WAY OF ABILENE
UNITED WAY OF SOUTHERN CAMERON COUNTY
UNITED WE SERVE
YOUTH AND FAMILY ALLIANCE

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